THE

UNIVERSITY of MARYLAND

BULLETIN

Summer School

1964

THE UNIVERSITY is the rear guard and the advance agent of society. It lives in the past, the present and the future. It is the storehouse of knowledge; it draws upon this depository to throw light upon the present; it prepares people to live and make a living in the world of today; and it should take the lead in expanding the intellectual horizons and the scientific frontiers, thus helping mankind to go forward —always toward the promise of a better tomorrow.

From "The State and the University"
the inaugural address of
President Wilson H. Elkins,
January 20, 1955,
College Park, Maryland.

The provisions of this publication are not to be regarded as an irrevocable contract between the student and the University of Maryland. The University reserves the right to change any provision or requirement at any time within the student's term of residence. The University further reserves the right at any time, to ask a student to withdraw when it considers such action to be in the best interests of the University.

SUMMER SCHOOL 1964

THE UNIVERSITY OF MARYLAND

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ADMISSION AND REGISTRATION PROCEDURES

ADMISSION: All new students must be formally admitted to the University through the Admission's Office, College Park campus.

Undergraduate: Must file application with Director of Admissions by June 5, 1964.

Graduate: Application for admission and all supporting records must be in the office of the Dean of the Graduate School by June 1, 1964.

REGISTRATION:

College of Education only:

1. Begin at south-west door of Armory and only according to the alphabetical schedule posted on page vii of this catalog.
2. In the Armory, undergraduate and special students must have schedule cards signed by adviser and Dean of College of Education.
3. Graduate students must have schedule cards signed by adviser, Dean of the College of Education, and the Dean of the Graduate School.

All Other Colleges:

1. Begin at the respective college office.
2. Here, schedule cards must be signed by the student's adviser and dean.
3. Graduate students must have signature of Dean of the Graduate School.
4. Complete registration at the Armory.

Registration is Neither Complete Nor Official Until All Forms Are Submitted and Fees Are Paid.

REGISTRATION SCHEDULE

MONDAY, JUNE 22, 1964*

8:00 A.M.—3:00 P.M.

To expedite registration, students have been grouped on the basis of the first letter of the last name. *No student will be permitted into the Armory until the appropriate time as listed below:*

TIME	STUDENTS	TIME	STUDENTS
8:00	W—Y	12:30	KA—LI
8:30	Z—BL	1:00	LJ—MN
9:00	BM—CH	1:30	MO—PH
9:30	CI—DN	2:00	PI—R
10:00	DO—F	2:30	SA—SS
10:30	GA—HD	3:00	ST—V
11:00	HE—J		

SUMMER SCHOOL CALENDAR

June 23 Tuesday	Classes begin
July 4 Saturday	Holiday
Aug. 14 Friday	Close of Summer Session

*Dormitories will be open for occupancy on and after 2:00 P.M. Sunday, June 21, 1964.

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UNIVERSITY CALENDAR, 1964

Spring Semester

February 3-7	Monday-Friday	Spring Semester Registration
February 10	Monday	Instruction Begins
February 22	Saturday	Washington's Birthday, Holiday
March 25	Wednesday	Maryland Day, not a holiday
March 26	Thursday	Easter Recess Begins After Last Class
March 31	Tuesday	Easter Recess Ends, 8 a.m.
May 13	Wednesday	AFROTC Day
May 28	Thursday	Pre-Examination Study Day
May 29-June 5	Friday-Friday	Spring Semester Examinations
May 30	Saturday	Memorial Day, Holiday
May 31	Sunday	Baccalaureate Exercises
June 6	Saturday	Commencement Exercises

Summer Session 1964

June 22	Monday	Summer Session Registration
June 23	Tuesday	Summer Session Begins
July 4	Saturday	Independence Day, Holiday
August 14	Friday	Summer Session Ends

Short Courses 1964

June 15-19	Monday-Saturday	Rural Women's Short Course
August 3-7	Monday-Saturday	4-H Club Week
September 8-11	Tuesday-Friday	Firemen's Short Course

UNIVERSITY CALENDAR, 1964-65

(Tentative)

Fall Semester
1964

September 14-18	Monday-Friday	Fall Semester Registration
September 21	Monday	Instruction Begins
November 25	Wednesday	Thanksgiving Recess Begins After Last Class
November 30	Monday	Thanksgiving Recess Ends 8 a.m.
December 22	Tuesday	Christmas Recess Begins After Last Class

1965

January 4	Monday	Christmas Recess Ends 8 a.m.
January 20	Wednesday	Pre-Examination Study Day
January 21-27	Thursday-Wednesday	Fall Semester Examinations

Spring Semester

February 2-5	Tuesday-Friday	Spring Semester Registration
February 8	Monday	Instruction Begins
February 22	Monday	Washington's Birthday, Holiday
March 25	Thursday	Maryland Day, not a Holiday
April 15	Thursday	Easter Recess Begins After Last Class
April 20	Tuesday	Easter Recess Ends 8 a.m.
May 12	Wednesday	AFROTC Day
May 27	Thursday	Pre-Examination Study Day
May 28-June 4	Friday-Friday	Spring Semester Examinations
May 30	Sunday	Baccalaureate Exercises
May 31	Monday	Memorial Day, Holiday
June 5	Saturday	Commencement Exercises

Summer Session

June 21	Monday	Summer Session Registration
June 22	Tuesday	Summer Session Begins
July 5	Monday	Independence Day, Holiday
August 13	Friday	Summer Session Ends

Short Courses

June 14-18	Monday-Friday	Rural Women's Short Course
August 2-6	Monday-Friday	4-H Club Week
September 7-10	Tuesday-Friday	Firemen's Short Course

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and
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B.S., Oklahoma State University, 1950; M.S., 1955; Ed.D., Cornell University, 1960.

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B.S., University of Maryland, 1933.

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THE SCHOOL

The Summer School of the University of Maryland at College Park provides the opportunity for year-round study and research. For this purpose, the University is offering an extensive and varied program of undergraduate and graduate courses, as well as lectures, special institutes and workshops for educators. More than 6,000 students from the 50 states and approximately 55 foreign countries are expected to attend the University during the eight-week period, June 22 through August 14, within which are included eight-week and six-week courses, and workshops and institutes of varying length.

Through its summer program, the University makes its resources available to students desiring a general education, and to those students interested in preparing for professional, scientific and technical areas for which it offers collegiate and graduate level work.

The courses of the Summer School are the regular courses of the University; each college on the College Park campus is represented in the School's offerings. All courses are equivalent to those offered in the academic year in content, method and credit, and are taught by members of the regular faculty or visiting lecturers of outstanding ability. Many departments within the various colleges have increased their course offerings for the 1964 Summer School.

The 1964 Summer School has been planned to:

1. Provide students enrolled during the academic year an opportunity to continue their studies during the summer.
2. Enable students to accelerate their programs of study.
3. Enable students to remove deficiencies.
4. Provide educational opportunities to visiting students pursuing degrees at other institutions.
5. Provide in-service education to teachers and school administrators.
6. Provide a variety of enrichment experience opportunities in areas of specialization.

RECREATIONAL, SOCIAL AND CULTURAL ACTIVITIES

A Recreation and Social Activities Committee, working with a full-time Summer Director of Recreation, has planned a varied program of activities of interest to students attending the University during the summer session. University swimming pools will be open with scheduled hours each afternoon and evening. There will be softball, tennis, and golf tournaments, a summer theater workshop, and a summer chorus in which students are invited to participate.

Planned activities will include round and square dancing, outdoor movies, Chapel vesper services, band concerts, watermelon feasts, guided tours of Washington, and other social functions. The Summer Recreation Director will be available to counsel with groups planning picnics or other events.

ACADEMIC INFORMATION

TERMS OF ADMISSION

All Summer School students new to the University must be officially admitted. *This applies to all non-degree as well as degree candidates.*

UNDERGRADUATE AND SPECIAL STUDENTS

A student seeking a bachelor's degree in any undergraduate college, who has not been previously admitted to the University, must file application with the Director of Admissions *not later than the end of the first week in June, 1964.*

A student who already has a bachelor's degree and who either does not wish graduate credit or does not meet requirements for admission to the Graduate School may be admitted to the undergraduate college consistent with his major interests, as a Special Student. He should be admitted to the University through the Director of Admissions *no later than the end of the first week in June, 1964.* Credit so obtained through the College of Education is ordinarily accepted for renewal of teaching certificate. A Special Student may take upper division (100, but not 200 or 300 level) courses.

GRADUATE STUDENTS

Application for admission to the Graduate School, and all supporting academic records, must be in the office of the Dean of the Graduate School by June 1, 1964.

Transfer Credit: To another institution. The student who wishes to transfer credit to another institution should submit an application on which he writes "For Transfer Only." Along with the application he should submit a letter from the graduate dean of the institution in which he is enrolled as a degree student, to the Dean of the Graduate School, University of Maryland, requesting permission to take a limited amount of work.

Transfer Credit: To the University of Maryland. Credit not to exceed six semester hours for course work at other recognized institutions may be applied towards the master's degree, only when such course work has been taken after the student has been admitted to the University of Maryland Graduate School. Before taking course work for transfer the student must have the approval of his adviser, the head of his major department, and

the Dean of the Graduate School. Normally, approval may be given only for courses which are not offered by the University of Maryland during the period of the student's attendance. The request for transfer of credit shall be submitted to the Graduate Council for approval when the student applies for admission to candidacy. The candidate is subject to final examination by this institution in all work offered for the degree.

Special Non-Degree Credit. The student who already has a master's degree and does not wish to pursue a doctoral program may submit an application marked "Non-Degree" and along with it, official transcript of all previous undergraduate and graduate study. If the student later desires to embark on a doctoral program, the credit earned in Special Non-Degree status may, at the discretion of the major adviser, be used in a doctoral program.

Degree Credit. The student who wishes to pursue either a master's or doctoral program must submit, along with his application, official transcripts of all work taken in institutions of higher education. The applicant is subject to admission requirements of the Graduate School and of the department in which he hopes to pursue his graduate work.

ACADEMIC CREDIT

The semester hour is the unit of credit. During the summer session a course meeting five times a week for six weeks or four times a week for eight weeks, each requiring the normal amount of outside work, is given a weight of three semester hours. Each class period is 80 minutes in length.

Students who are matriculated as candidates for degrees will be given credit toward the appropriate degree for satisfactory completion of courses. All courses offered in the Summer School are creditable toward the appropriate degree provided they are included in the student's program as planned with his adviser.

All students will receive an official grade report specifying the amount and quality of work completed.

MARKING SYSTEM

The following symbols are used for marks: A, B, C, and D—passing; F—Failure; I—Incomplete. Mark "A" denotes superior scholarship; mark "B," good scholarship; mark "C," fair scholarship; and "D," passing scholarship. The mark of "I" (incomplete) is exceptional. Complete regulations governing marks are printed in *University General and Academic Regulations.*

MAXIMUM LOAD

Undergraduates:

Undergraduate students may earn credit at the discretion of their respective advisers in accordance with the following guide lines:

Students enrolled only in courses of 8-week duration may earn from 8-10 credits.

Students enrolled only in courses of 6-week duration may earn from 6-8 credits.

Students enrolled in combinations of 6 and 8-week courses may earn 7-9 credits.

Graduate:

Students enrolled only in courses of 8-week duration may earn a maximum of 8 credits.

Students enrolled only in courses of 6-week duration may earn a maximum of 6 credits.

Students enrolled in combinations of 6 and 8-week courses may earn a maximum of 7 credits.

SUMMER GRADUATE WORK

Master's degrees are offered through the Graduate School as follows: Master of Arts, Master of Science, Master of Arts in American Civilization, Master of Education, Master of Business Administration, and Master of Music.

Doctor's degrees offered through the Graduate School are as follows: Doctor of Philosophy and Doctor of Education.

Graduate work in the Summer School may be counted as residence toward a master's degree or Doctor of Education degree. A full year of residence or the equivalent is the minimum requirement for each degree.

The requirements for any of the above degrees may be obtained upon request from the Graduate School.

Special regulations governing graduate work in Education and supplementing the statements contained in the Graduate School Announcements are available in duplicated form and may be obtained from the College of Education. Each graduate student in Education should have a copy. Students seeking the master's degree as a qualification for a certificate issued by the Maryland State Department of Education or any other certifying agency should consult the appropriate bulletin for specific requirements. Advisers will assist students in planning to meet such requirements.

All students desiring graduate credit, whether for meeting degree requirements, for transfer to another institution, or for any other purpose, must be regularly matriculated and registered in the Graduate School.

CANDIDATES FOR DEGREES

All students who expect to complete requirements for degrees during the

summer session should make application for diplomas at the office of the Registrar during the first two weeks of the summer session.

THE PROGRAM IN AMERICAN CIVILIZATION

The University considers that it is important for every student to achieve an appreciative understanding of the country, its history and its culture. It has therefore established a comprehensive program in American civilization. This program is also designed to provide the student with a general educational background.

All students receiving a baccalaureate degree from the University of Maryland must (except as specific exceptions are noted in printed curricula) obtain 24 semester hours of credit in the lower division courses of the American Civilization Program. Although the courses in the Program are prescribed generally, some choice is permitted, especially for students who demonstrate in classification tests good previous preparation in one or more of the required subjects.

The 24 semester hours in American civilization are as follows:

1. English (12 hours, Eng. 1, 2 and 3, 4), American history (6 hours, H. 5, 6), and American government (3 hours, G. & P. 1) are required subjects; however, students who qualify in one, two or all three of these areas by means of University administered tests will substitute certain elective courses. Through such testing a student may be released from 3 hours of English (9 hours would remain an absolute requirement), 3 hours of history (3 hours remaining as an absolute requirement), and 3 hours of American government. Students released from 3 hours of English will take Eng. 21 instead of Eng. 1 and 2. Those released from 3 hours in history will take one lower-division history course instead of H. 5 and 6. Students who have been exempted from courses in English, American history, or American government may not take such courses for credit.

2. For the 3 additional hours of the 24 hours required the student elects one course from the following group (Elective Group I):

Econ. 37, Fundamentals of Economics (Not open to freshmen; students who may wish to take additional courses in economics should substitute Econ. 31 for Econ. 37)

Phil. 1, Philosophy for Modern Man
Psych. 1, Introduction to Psychology
Soc. 1, Sociology of American Life

3. Students who, on the basis of tests, have been released from 3, 6 or 9 hours in otherwise required courses in English, American history or American government (see 1. above), shall select the replacements for these courses from any or all of the following groups: (a) more advanced courses in the same department as the required courses in which the student is excused, or (b) Elective Group I (see 2. above) provided that the same

course may not be used as both a Group I and a Group II choice, or (c) Elective Group II. Group II consists of the following 3-hour courses.

H. 42, Western Civilization; either H. 51 or 52, The Humanities; either Music 20, Survey of Music Literature or Art 22, History of American Art; and Soc. 5, Anthropology.

GENERAL INFORMATION

REGISTRATION

All new students must obtain admission to the University from the Director of Admissions or the Dean of the Graduate School *before* registration. Every student planning to register for a course or courses must have been admitted to the University regardless of his status as a degree or non-degree student. Refer to page 3 for greater detail.

Registration for undergraduate and graduate students will take place on Monday, June 22, from 8:00 a.m. to 3:00 p.m., in accordance with the Registration Schedule printed on page vii of this catalog. *No student will be permitted into the Armory before the time listed in the Registration Schedule.*

Students may register in "late registration" at the Registrar's Office on June 23. After June 23, exceptional cases may be registered only after approval of the appropriate dean. The late registration fee, charged on and after June 23, is $10.00.

REGISTRATION: COLLEGE OF EDUCATION ONLY

All Education advisers will be located in the south basement wing of the Armory. Students will be admitted only through the south-west door of the Armory *according to the alphabetical schedule* posted on page vii of this catalog. Students then proceed to the room in which their respective advisers are located (nearby rooms in the Armory basement).

Early Registration: Students must request special permission in writing from the Dean of the College of Education before Monday, June 22, 1964 giving the reason for the request. Upon approval, a form will be issued to the student allowing him entrance to the Armory out of alphabetical order.

No special permission will be given for reasons of unawareness about the schedule or because a student is riding with someone who registers earlier. In the latter case, all students riding together should plan to register at the latest hours scheduled for anyone in the group.

Registration cards must be approved by both the student's adviser and the Dean of the College of Education. Graduate students must in addi-

tion receive the approval of the Dean of the Graduate School. Graduate students carrying the official Graduate School matriculation card may obtain the Graduate Dean's approval in the Armory. Graduate students not carrying the official graduate school matriculation card must report to the Graduate School office, Rooms Q 112-115, Business and Public Administration building, before proceeding to the upper floor of the Armory to complete registration. After approval, registrations are completed on the first floor of the Armory where students secure section assignment, receive bills, pay fees, and submit all forms to the Registrar's representatives. *UNTIL ALL COMPLETED FORMS ARE SUBMITTED TO THE REGISTRAR'S REPRESENTATIVES, REGISTRATION IS NEITHER COMPLETE NOR OFFICIAL.*

REGISTRATION FOR ALL COLLEGES EXCEPT COLLEGE OF EDUCATION

Students in all colleges, except the College of Education, will begin registration on June 23 by securing registration cards from the respective College offices. Registration cards must be approved by both the student's adviser and dean. Graduate students secure the approval of the Dean of the Graduate School. After approval, registrations are completed at the Armory where students secure section assignment, receive bills, pay fees, and submit all forms to the Registrar's representatives. *UNTIL ALL COMPLETED FORMS ARE SUBMITTED TO THE REGISTRAR'S REPRESENTATIVES, REGISTRATION IS NEITHER COMPLETE NOR OFFICIAL.*

LENGTH OF CLASS PERIOD

Classes during the 1964 summer session will meet on the following time schedule:

8:00 — 9:20
9:30 — 10:50
11:00 — 12:20
12:30 — 1:50
2:00 — 3:20
3:30 — 4:50

Weekly Class Schedule

6-week classes

2-credit courses meet 4 days as indicated in the bulletin.

3-credit courses meet daily.

4-credit courses meet daily and include multiple periods for laboratory.

8-week classes

2-credit courses meet M.W.F.

3-credit courses meet M.T.Th.F.

4-credit courses meet daily, plus laboratory time.
5-credit courses meet daily, plus 2 additional periods to be arranged each week.

DEFINITION OF RESIDENCE AND NON-RESIDENCE

Students who are minors are considered to be resident students if at the time of their registration their parents have been domiciled in the State of Maryland for at least six months.

The status of the residence of a student is determined at the time of his first registration in the University and may not thereafter be changed by him unless, in the case of a minor, his parents move to and become legal residents of Maryland by maintaining such residence for at least six months. However, the right of the minor student to change from a non-resident status to resident status must be established by him prior to the registration period set for any semester or session.

Adult students are considered to be residents if at the time of their registration they have been domiciled in Maryland for at least six months, provided such residence has not been acquired while attending any school or college in Maryland or elsewhere. Time spent on active duty in the armed services while stationed in Maryland will not be considered as satisfying the six-months period referred to above except in those cases in which the adult was domiciled in Maryland for at least six months prior to his entrance into the armed service and was not enrolled in any school during that period.

The word "domicile" as used in this regulation shall mean the permanent place of abode. For the purpose of this rule only one domicile may be maintained.

TUITION AND FEES

Undergraduate Students

General tuition fee, per credit hour	$15.00
Nonresidence fee	15.00
Must be paid by all students who are not residents of Maryland.	
*Application fee (see explanation below)	10.00

*The application fee for the undergraduate summer session applicant partially defrays the cost of processing applications for admission to this division of the University. If a new applicant enrolls for the term for which he applied, the fee is accepted in lieu of the matriculation fee. Applicants who have been previously enrolled with the University of Maryland at College Park or Baltimore, or at one of its off-campus centers are not required to pay the application fee since they have already paid the matriculation fee.

Matriculation fee	10.00
Payable only once, upon admission to the University. Every student must be matriculated.	
Infirmary fee	1.00
Recreation fee	1.00

Graduate Students

General tuition fee, per credit hour	$18.00
Matriculation fee	10.00
Payable only once, upon admission to the Graduate School.	
Recreation fee	1.00
Required of all students registered in the Summer School.	
Infirmary fee (voluntary)	1.00
The Infirmary services are available to graduate students who elect to pay at the time of registration the fee of $1.00 for the summer session.	
Testing fee (new graduate students in Education only)	5.00

There is no non-residence fee for graduate students.

Miscellaneous Information

Auditors pay the same fees as regular students.

The graduation fee is $10.00 for bachelor's and master's degrees, and $50.00 for doctor's degrees.

A fee of $5.00 is charged for each change in program after June 26. If such change involves entrance to a course, it must be approved by the instructor in charge of the course entered. Courses cannot be dropped after July 10. All changes must be approved by the appropriate dean and filed in the Office of the Registrar.

A special laboratory fee is charged for certain courses where such fee is noted in the course description.

Laboratory courses in chemistry carry laboratory fees of $12.00 and $20.00; in addition the student is charged for any apparatus which cannot be returned to the stock room in perfect condition. Other laboratory fees are stated in connection with individual courses.

Physical education fee charged each student registered for any physical activity course, $6.00.

Late registration fee, $10.00.

WITHDRAWAL AND REFUND OF FEES

Any student compelled to leave the University at any time during the Summer School must secure the Application for Withdrawal form from the office of his dean and file it in the Office of the Registrar, bearing the

proper signatures. If this is not done, the student will not be entitled, as a matter of course, to a certificate of honorable dismissal, and will forfeit his right to any refunds to which he would otherwise be entitled. The date used in computing refunds is the date the Application for Withdrawal is filed in the Office of the Registrar.

In the case of a minor, official withdrawal will be permitted only with the written consent of the student's parent or guardian.

With the exception of board charges, students withdrawing from the University will receive a refund of all charges, except the matriculation fee, in accordance with the following schedule:

Period From Date Instruction Begins	*Percentage Refundable*
One week or less	70%
Between one and two weeks	50%
Between two and three weeks	20%
After three weeks	0

No refunds of fixed charges, lodging, tuition, laboratory fees, etc., are allowed when courses are dropped, unless the student withdraws from the University.

LIVING ACCOMMODATIONS AND MEALS

Housing accommodations are available at the following cost, on the basis indicated:

Regular Residence Halls	*Double Occupancy*	*Single Occupancy*
Weekly rate	$ 9.00	$ 13.00
Six weeks session	54.00	78.00
Eight weeks session	72.00	104.00

GENERAL INFORMATION

Since most of the rooms in the residence halls are double rooms, there is no guarantee that a request for a single room can be granted. No room deposit is required for the summer session; however, the full applicable room charge is payable at registration. No refunds of room charges will be made after the third week of the summer session. All students are held responsible for compliance with University regulations. The University reserves the right to inspect residence hall rooms when deemed necessary by the staff.

The typical student room is furnished with a bed, a chest of drawers, a desk, and chair. Students should supply themselves with other essential items such as a study lamp, wastebasket, and ashtrays. Students must provide themselves with linens and a pillow, either from home or from the commercial linen service which operates on the University campus. This

company rents sheets, pillow cases, towels, blankets, and pillows for a nominal fee. Arrangements for linen service can be made after your arrival.

THE UNIVERSITY RESIDENCE HALLS WILL OPEN FOR OCCUPANCY AT 2:00 P.M. SUNDAY, JUNE 21, AND WILL CLOSE AT NOON ON SATURDAY, AUGUST 15.

Early application for a reservation is advisable, as only those who have made reservations can be assured that rooms are available for occupancy upon their arrival. Rooms will not be held later than noon on Tuesday, June 23. If you desire to make application for campus residence, please complete, sign, and return the Room Application Card found in this Bulletin. Indicate your precise classification, the exact dates and number of weeks of attendance, type of room desired, and whether or not you desire board on a prepaid basis. You will be notified by an assignment letter after June 1 of the time and place to report to claim your room.

You will be given your mailing address and telephone number at the time you receive your room assignment. Your mail and telephone calls *cannot* be delivered to you without this specific information.

Campus housing is not available for faculty members during the summer session. Listings of off-campus rooms, apartments, and houses are available in the University Housing Office, North Administration Building. Students occupying off-campus housing will maintain the same standards as required of those in the University residence halls and fraternity houses. Board is available to all students under the following options:

(a) Cafeteria style with cash payment for each individual meal.

(b) On a prepaid basis at the following rates payable at time of registration:

\$72.00 for the six weeks session.
\$96.00 for the eight weeks session.

No refunds will be made on board to those students who elect the prepaid basis except in the case of withdrawal from the University or residence halls, in which event refund will be made on a pro-rata weekly basis.

STUDENT HEALTH

The University Infirmary, located on the campus near the Student Union provides medical service for the undergraduate students in the summer session, and also for those graduate students who elect to pay the \$1.00 Health Service fee. Students who are ill should report promptly to the University Infirmary in person. Serious emergencies may be reported by phone to Ext. 7666 or 7667. Doctor's Office hours are: Week days, 9:00 a.m. to 11:00 a.m.; week ends, 10:00 a.m. to 11:00 a.m. A nurse is on duty 24 hours each day.

PARKING OF AUTOMOBILES

For use of students, staff members, and employees, several parking lots are provided. Students may park in lot 1, 3, 6 and 7. All other lots are reserved for faculty and staff members. The University rules forbid the parking of cars on any campus road. These rules are enforced by campus police.

LIBRARY FACILITIES

The new $2.5 million library building located in a prominent position at the west end of the main quadrangle was opened for service in January, 1958. The almost 200,000 square feet of floor space allow for greatly improved library service and accommodations for study. Two large reading rooms are air-conditioned for student convenience.

The building will ultimately house 1,000,000 volumes; it seats 2,000 readers. The 200 carrels and individual studies provide excellent facilities for graduate students and faculty.

Library facilities outside the main building include the Engineering and Physical Sciences Library located in the Mathematics Building and the Chemistry Library.

The University System of Libraries has in its collection 600,000 volumes, in addition to thousands of government publications and uncatalogued materials. Over 7,000 periodicals and 200 newspapers are received. The libraries are able to supplement their services to graduate students and faculty by borrowing material from other libraries through interlibrary loan.

UNIVERSITY BOOKSTORE

For the convenience of students, the University maintains a University Bookstore, located in the Student Union Building, where students may obtain at reasonable prices textbooks, stationery, classroom materials and equipment. The Bookstore operates on a cash basis.

FOR ADDITIONAL INFORMATION

Detailed information concerning the American Civilization Program, fees and expenses, scholarships and awards, student life, and other material of a general nature, may be found in the University publication titled *An Adventure in Learning.* This publication may be obtained on request from the Catalog Mailing Room, North Administration Building, University of Maryland at College Park. A detailed explanation of the regulation of student and academic life, may be found in the University publication titled, *University General and Academic Regulations.* This is mailed in September and February of each year to all new undergraduate students. Requests for course catalogs for the individual schools and colleges should be directed to the deans of these respective units, addressed to:

COLLEGES LOCATED AT COLLEGE PARK:

Dean
(College in which you are interested)
The University of Maryland
College Park, Maryland

PROFESSIONAL SCHOOLS LOCATED AT BALTIMORE:

Dean
(School in which you are interested)
The University of Maryland
Lombard and Greene Streets
Baltimore 1, Maryland

LECTURES, INSTITUTES AND WORKSHOPS

As an integral part of its summer program, the University offers a Summer Lecture Series; institutes supported by the National Science Foundation, National Defense Education Act, and other granting organizations; and specialized educational activities through workshops. Opportunities for participating and specific information about these events are provided below.

SUMMER LECTURE SERIES

The 1964 Summer School will sponsor a series of lectures during the 8-week period from June 22-August 14. These lectures are planned by a University-wide committee which selects outstanding lecturers and current topics of interest to all Summer School students regardless of college or department.

All summer school students, faculty members, and other interested persons are cordially invited to attend. No admission charge will be made. For further information contact the Summer School office on the College Park campus.

INSTITUTE FOR TEACHERS OF MATHEMATICS IN JUNIOR HIGH SCHOOL

The Department of Mathematics of the College of Arts and Sciences with the financial support of the National Science Foundation is offering a six-week summer institute for junior high school teachers of mathematics to assist the teachers in improving the quality of teaching of mathematics.

The institute should also give the teachers a better understanding of current curricular developments and make it possible for them to interpret these developments for junior high school programs.

Participants of the institute who are graduate students in the College of Education may obtain graduate credit for the six hours of course work completed in connection with the Institute.

Mathematics 182—Introduction to Algebra, (3) and Mathematics 189—Summer Institute for Teachers of Science and Mathematics are required of each participant. For more information on the courses see the listings under the Department of Mathematics. In addition there will be a demonstration class in which experimental material for grades seven and/or eight will be taught. A seminar will provide for discussion of the materials in the demonstration class and associated teaching problems.

Financial assistance in the form of a National Science Foundation grant will be available to about 40 participants at the standard N.S.F. rate of $75 per week plus $15 per week for each dependent (to a maximum of four). This stipend will be tax free to students enrolled for credit toward a degree. A travel allowance of 4 cents per mile for a single round trip from the participant's home to the institute (to a maximum of $80) will also be paid. All tuition and fee charges will be paid by the N.S.F. grant. Participants are expected to have had at least two years' experience teaching mathematics at the junior high school level and to have been appointed to a junior high school position for 1964-65.

Inquiries should be addressed to: Professor R. A. Good, Director, Summer Institute for Mathematics Teachers, Department of Mathematics, University of Maryland, College Park, Maryland.

INSTITUTE IN MATHEMATICS FOR ELEMENTARY SCHOOL TEACHERS, PRINCIPALS AND SUPERVISORS

A National Science Foundation grant has made it possible for the Mathematics Department of the College of Arts and Sciences to offer a six weeks summer institute in mathematics for elementary school personnel. This institute should provide a participant with the background necessary to understand and evaluate the current experimental programs in elementary mathematics being used in many communities over the country.

Two courses in mathematics will be required of each participant: Mathematics 181—Introduction to Number Theory (3), and Mathematics 183—Introduction to Geometry (3). Each lecture will be followed by a period of supervised study. A demonstration class will be offered, using experimental materials written for the fourth grade. Visiting lecturers will discuss with the participants techniques and procedures for meeting the needs of mathematics teaching in the elementary grades.

Financial assistance in the form of a National Science Foundation grant will be available to about 35 participants at the standard N.S.F. rate of $75.00 per week plus $15 per week for each dependent (to a maximum of four). A travel allowance of 4 cents per mile for a single round trip from the participant's home to the institute will also be paid. All tuition and fee charges will be paid by the N.S.F. grant. Participants who are graduate students in the College of Education may obtain graduate credit for the six hours of course work completed with the institute.

Inquiries should be addressed to: Dr. Stanley Jackson, Director, Summer Institute in Mathematics for Elementary School Personnel, College of Education, Skinner Building, University of Maryland, College Park, Maryland.

INSTITUTE IN COUNSELING AND GUIDANCE TRAINING

The National Defense Education Act provides for summer institutes in Counseling and Guidance Training. The institute this summer is an advanced counseling practicum, with a didactic correlate. Enrollees will counsel intellectually able high school students under the supervision of counseling psychologists, and the didactic content will be on such topics as motivation of able students, testing, developmental psychology and counseling theory. Institute activities are for the full day.

Enrollees will be secondary school counselors from the public and private non-profit secondary schools of Maryland and other states.* Tuition and other fees are exempted. Enrollees from public schools will receive a $75 weekly stipend with a $15 allotment for each dependent. Nomination of Maryland public school counselors will be through the superintendents' offices of the local systems. Secondary school counselors in Maryland private, non-profit schools, and in non-Maryland schools should apply to Dr. Margaret M. Bott, University Counseling Center, if interested in more information.

INSTITUTE FOR HIGH SCHOOL TEACHERS OF BIOLOGY

The Colleges of Agriculture, Arts and Sciences, and Education, and the National Science Foundation are cooperating to offer a program of courses designed for high school teachers of biology. These courses combine in various ways to enable high school teachers to improve their knowledge of the biological sciences and related material during an eight-week institute. Credit earned in the Summer Institute in Science for High School Teachers of Biology and in similar related science courses may accumulate up to one-half of the credit hours requirement for the Master of Education degree.

*Only holders of a master's degree will be eligible for the the 1964 Summer Institute.

A National Science Foundation grant makes it possible for the 1964 summer institute to provide financial assistance for about 40 participants at the standard N.S.F. rate of $75 per week plus $15 per week for each dependent (to a maximum of four). A travel allowance of 4 cents per mile for a single round trip from the participant's home to the institute will also be paid (maximum $80). All tuition and fee charges will be paid by the N.S.F. grant.

The summer institute covers the general fields of the biological sciences and the physical sciences. Basic to the program will be a required seminar covering recent developments in the biological sciences. This two credit seminar is listed in the Summer School Bulletin as Botany 199 and will meet one day a week during the regular eight-week summer session.

The institute program will include the following courses which are described in detail in this Bulletin under the headings of the respective departments:

Biological Sciences:
Bot. 151-S, Bot. 153, Bot. 199, Ent. S-121, Zool. 102.

Physical Sciences:
Chem. 111, Phys. 130, 131, Phys. 150.

A maximum of 8 credit hours may be taken. Stipends will be available only to those participants scheduling at least 7 hours in the above courses, or in other courses specifically approved by the Director of the Institute.

Inquiries should be sent to: Dr. J. David Lockard, Director of the N.S.F. Summer Science Institute, Department of Botany, University of Maryland, College Park, Maryland.

INSTITUTE IN MODERN HEALTH EDUCATION

In cooperation with the U.S. Public Health Service, the University of Maryland will provide an institute to improve school health education by helping to bring up to date the knowledge of advancements in health sciences. The program will be primarily concerned with the health and health problems of children and youth. It will be of special interest to school, public health and health agency personnel who are responsible full or part time for health education in schools.

Speakers and discussion leaders will be specialists from the University, the National Institutes of Health, and other health centers. Subjects will range from recent developments in body maintenance and fitness, mental health and mental illness, environmental health hazards, and health aspects of population problems and social change. Sessions will be held at the College Park Campus and at the National Institutes of Health in Bethesda, Maryland.

Six-week participation, 6 hours credit. First or second three week periods participation, 3 hours credit. The institute will meet daily from 9-12,

with optional field trips and consultation periods provided in the afternoon. Limited to 60 participants.

WORKSHOP ON TEACHING CONSERVATION OF NATURAL RESOURCES

The College of Agriculture and the Conservation Education Division of the Natural Resources Institute cooperate in offering this workshop devoted to the study of the State's basic wealth, its natural resources. Basic source information will be available, specimens will be collected, pictures will be taken in different resource regions, teaching aids will be evaluated, and effective methods of teaching conservation and natural resources will be studied. The workshop offers six semester hours of graduate credit.

State and federal workers in conservation of natural resources will be used extensively as consultants in their specialties. Field trips will be taken to all the natural regions of the State so that students will be able to observe the resources problems and current practices. Adequate opportunity will be provided for students to analyze problems as a group and develop logical solutions.

The workshop will be held on the College Park campus of the University June 22 to July 31, 1964. Registration is limited to 30 persons.

WORKSHOP ON ECONOMIC EDUCATION

The Workshop on Economic Education is sponsored by the Council on Economic Education in Maryland and by six colleges and universities in Maryland giving graduate study in education—Goucher College, Johns Hopkins University, Loyola College, Towson State College, the University of Maryland, and Western Maryland College. The Maryland State Department of Education, the Baltimore Board of School Commissioners and the Department of Catholic Education cooperate in the program. At the University of Maryland the College of Education will offer the Workshop with the cooperation of the Department of Economics.

Members of the workshop are mostly secondary school teachers in Maryland, but some elementary teachers and some out-of-state participants may be admitted. The purpose of the workshop is to give teachers a better understanding of the basic principles of economics and of the operation of the American economic system. Activities of the workshop are designed to assist teachers to develop ways of demonstrating to their pupils how economic principles are important for citizenship.

Economists and curriculum experts make up the staff of the workshop. Visiting speakers and consultants will also participate. Different points

of view are presented by representatives of business, agriculture, and labor, and there will be open discussion on all problems presented.

The workshop involves three weeks of intensive study extending from July 20 to August 7. Sessions will be scheduled for a minimum of six hours per day, Monday through Friday.

Participants in the workshop may receive three semester hours of credit in Education. Those desiring credit from the University of Maryland should register in Ed. 189-9, Workshops, Clinics and Institutes: Economic Education. If graduate credit is desired, application for admission must be made to the Graduate School before June 1. Other applications must also be in the Admissions Office before June 1.

A limited number of tuition scholarships will be granted. Interested persons should make application on a special form which will be available upon request. Each applicant must be recommended by his superintendent or principal. Early application is encouraged to assure a place in the workshop.

Correspondence concerning application or information about the workshop should be addressed to Dr. Elinor Pancoast, Field Director, Council for Economic Education in Maryland, Towson State College, Towson, Md.

EDUCATION IN FAMILY FINANCE WORKSHOP

The Colleges of Education, Business and Public Administration, and Home Economics, in cooperation with the National Committee for Education in Family Finance, offer a four-week, four-credit workshop June 22 through July 17. The workshop program includes learning experiences in subject matter, curriculum construction, and educational techniques. During the six hour day participants will have opportunity to develop broad understandings of concepts and facts relating to family financial security in the areas of budgeting and financial planning, savings and investments, banking services, insurance, home ownership, taxation, wills and estates, social security and pension plans, and consumer credit. The workshop will also provide the opportunity to develop teaching materials and curriculum guides for use in improving and expanding school programs in family finance education.

Participants will register for credit through course Ed. 189-1, Workshops, Clinics, and Institutes: Education in Family Finance. Participants must be admitted to either the College of Education or the Graduate School. If graduate credit is desired, admission to the Graduate School must be completed before June 1.

Scholarships covering tuition will be granted to qualified applicants. Interested persons should make application for scholarship on a special form which will be available upon request. Each scholarship recipient must be recommended to the workshop by his superintendent or principal. All

correspondence concerning the workshop should be addressed to C. Raymond Anderson, Director, Family Finance Workshop, College of Education, University of Maryland, College Park, Maryland.

WORKSHOP IN HUMAN DEVELOPMENT

The Institute for Child Study, College of Education, offers a six-week human development workshop each summer providing opportunities for (1) study and synthesis of scientific knowledge about human behavior; (2) experience in the analysis of case records; (3) preparation of study group leaders for in-service child and youth study programs; (4) planning in-service child and youth study programs for teachers or other human relations workers; (5) planning preservice teacher education courses and laboratory experiences for prospective teachers; (6) examination of implications of scientific knowledge about human development and behavior for school organization, curriculum development, guidance services, club leadership, and other programs and procedures designed to foster mental health and optimal development of children, youth, and adults.

The workshop is designed for teachers and administrators who have been actively engaged in the Child and Youth Study Program sponsored by the Institute, for persons who are interested in participating in such a program, and for persons in other fields where human relations are a vital factor.

This workshop will extend from June 22 to July 31. Workshop lectures, laboratory groups and seminars will be scheduled between 8:00 a.m. and 12:00 p.m. Special lectures, interest groups and conferences are scheduled from 1:30 to 3:00 p.m.

Inquiries concerning this and other workshops in human development should be addressed to Director of Summer Workshops, Institute for Child Study, University of Maryland, College Park, Maryland.

CHILD STUDY LEADERS WORKSHOP

For leaders and prospective leaders of child and youth study groups who cannot attend the full six weeks workshop, a two-week workshop will be held on the University campus from June 22 to July 3. Each day's activities will include a lecture-discussion period centering around major scientific concepts explaining growth, development, and behavior; laboratory periods for analyzing case record material at the first, second, or third year level of the program; reading and special interest periods. (Participants will choose the year level of the group they expect to lead). Two hours' credit can be earned for full time participation in one of these workshops.

WORKSHOP ON APPLICATIONS OF HUMAN DEVELOPMENT PRINCIPLES IN CLASSROOMS

For people who have had three or more years of child study experience either in workshops or in groups during the school year, a 2 credit work-

shop will be held at the University from July 6 to July 17. Classroom practices will be examined in the light of human development principles, and procedures will be studied for possible beyond-third-year action research projects during the school year. Opportunities will be offered also to superintendents, supervisors, and principals who are interested in exploring the implications of human development principles for school operation.

WORKSHOPS ON HUMAN DEVELOPMENT AND RELIGIOUS EDUCATION

Two workshops in human development, each for 2 credit hours, for persons in the field of religious education will be held on the University campus from July 20 to July 31. These workshops will be entirely nondenominational and any person responsibly concerned with religious education can appropriately enroll regardless of his faith.

A workshop for persons without prior workshop experience will examine scientific knowledge about human development, learning, behavior and adjustment, and will consider the implications of this knowledge for religious education practice in vacation, weekday, and Sunday schools operated by church groups.

Advanced workshops for persons who have had a previous workshop in Human Development and Religious Education will provide advanced experiences with concepts and analyses.

WORKSHOP ON ACTION RESEARCH IN HUMAN DEVELOPMENT EDUCATION

A workshop for teachers and other school personnel who are interested in learning more about action research or in initiating action research projects in their own schools. This 2 credit workshop will be held at the University from August 3 to August 14. The role of action research in the solution of educational problems will be emphasized. Participants will have the opportunity to learn about and to develop designs and instruments for carrying out action research in their own schools and classrooms. Preference in enrollment will be given to persons coming as teams for the purpose of developing an action research design for implementation in their own school or school system.

The daily schedules of all two weeks workshops will be similar to those of the six weeks workshop. *Only full time participants can be accepted.* These two-week workshops may be taken for either graduate or undergraduate credit.

WORKSHOP ON HUMAN RELATIONS IN EDUCATIONAL ADMINISTRATION

This workshop is concerned with the development of leadership teams capable of providing in-service programs in human relations in local school

systems. In addition to basic theory, the workshop will center on the practice and acquisition of specific human relations skills.

Preference in enrollment will be given to teams representing Maryland school systems which have participated in the workshop in the past, and to teams of four to six persons designated by other Maryland school systems.

Enrollment in the workshop will be limited. Applications for team participation from local school systems will be processed in the order received. If more than one application is received at the same time, the director of the workshop will make the final decision.

The workshop will meet daily from 9:00 a.m. to 3:00 p.m., June 22 through July 31. A student may earn six semester hours of graduate credit.

WORKSHOP IN INSTRUCTIONAL MATERIALS

The Workshop in Instructional Materials will be offered for school librarians at all levels, school administrators, and classroom teachers in grades kindergarten to twelve, for three weeks, June 22 to July 10. It is designed to give librarians, teachers, and other school personnel an opportunity to work together on problems in the selection, organization and utilization of instructional materials in school programs. Consideration will be given to materials of all types, including: books, films, filmstrips, records, free and inexpensive materials. All grade levels and subject areas will be included. A student may earn three hours of graduate or undergraduate credit in Education or Library Science.

Further information may be obtained by writing to: Dale W. Brown, 456 McKeldin Library, University of Maryland, College Park, Maryland.

WORKSHOP IN MUSIC

Through the cooperation of the Department of Music, the College of Education, and University College, a workshop in music will be offered during the 1964 summer session. The regular procedures for admission to the University, listed elsewhere in this bulletin, apply also to the workshop.

The workshop, with its Band section directed by Clarence Sawhill, is offered during the period June 22-July 10. Participants will register for Mus. Ed. 155, Organization and Techniques for Instrumental Class Instruction, 3 credits, and will meet daily in afternoon sessions. The workshop will include lectures and demonstrations of all phases of instrumental teaching. Daily laboratory sessions will be held in connection with rehearsals of two bands composed of selected high school students.

In addition, there will be an opportunity to observe a selected high school chorus (in residence June 29-July 3), conducted by a nationally known

choral director. The rehearsals of the chorus will also be open to all students enrolled in other Music or Music Education courses during the summer sessions. The chorus and the senior high band will give a joint concert on July 3.

Copies of a brochure containing detailed information about the workshop may be obtained by addressing the Department of Music. See page 8 for the applicable fees including registration, dormitory room, and supplementary fee.

WORKSHOP IN PHYSICAL EDUCATION—PE 189

The workshop offers professional assistance to teachers of physical education. A realistic foundation for physical education will be developed and related to modern programs. Individual and group problems will be given special consideration.

This workshop will meet from 8:30 a.m. to 12:00 noon and 1:00-3:00 p.m. daily for three weeks, June 22 to July 10. Six (6) credits, either graduate or undergraduate, are offered. In either case, the credits are counted as "content" for certification in Maryland.

WORKSHOP FOR TEACHERS OF SECONDARY SCHOOL ENGLISH

The College of Education, in cooperation with the departments of English, Journalism, and Speech, the Maryland State Department of Education, and the National Council of Teachers of English will sponsor a workshop for teachers of secondary school English.

The emphasis will be upon the concept of integration in the teaching of literature, composition, language, journalism, and speech through deeper insight into the humanities, through better acquaintance with the newer media of instruction, and through the development of new techniques and materials of instruction.

The workshop will be held from June 22 to July 10, from 10:00 a.m. to 3:30 p.m., Monday through Friday. Three (3) hours of credit may be earned. All workshop participants must be admitted to the University as special students or to the Graduate School as graduate students before June 1. Enrollment will be limited and preference will be given to teachers with two years or more of secondary school experience. Registration will be June 22.

All correspondence concerning application or information should be addressed to Miss Marie D. Bryan, College of Education.

WORKSHOPS IN SPECIAL EDUCATION

THE EDUCATION OF CHILDREN WITH LEARNING IMPAIRMENTS

This workshop will consider the theoretical background and the methods, curricula and materials employed in the approach to the various learning problems of children.

Opportunities for observation, participation and consultation in program planning, curriculum organization, and the use of methods and materials will be provided according to the primary learning problems involved: Mentally Handicapped (Educable), Mentally Deficient (Trainable), Pre-School Mentally Retarded, Perceptual Learning Problems, Disturbances in Emotional Development, and Motor Handicapped. Selected consultants will be utilized.

The workshop will meet off-campus daily from 9:00 a.m.-3:00 p.m., June 22 to July 17. Four units of undergraduate or graduate credit may be earned.

Students planning to attend the Workshop should request the Special Education Summer Session Brochure for program details from Dr. Jean Hebeler, Program of Special Education, University of Maryland, College Park, Maryland.

TELEVISION WORKSHOP

Each summer the Department of Speech offers a television workshop (Speech 149—3 hours, see listing under Speech and Dramatic Art) which is primarily designed for the classroom teacher.

The workshop provides an opportunity to (1) learn the fundamental principles of instructional television, (2) to develop techniques of presentation, (3) to further develop professional skill and competence.

The air-conditioned studios in Woods Hall contain the latest in professional broadcast-type equipment.

Enrollment is limited. Inquiries may be sent to Professor George F. Batka, Director, Radio and Television, Department of Speech, University of Maryland, College Park, Maryland.

WORKSHOP IN PHYSICAL ACTIVITY IN RECREATION PROGRAMS FOR THE RETARDED

This is a cooperative workshop, with Recreation, Special Education, and the Joseph P. Kennedy, Jr., Foundation, collaborating. It will feature an exploration of the problems involved in programming, staffing, and skills instruction in the special recreation program for the mentally retarded child. Specific emphasis is placed upon training the prospective

teacher and recreation leader of the mentally retarded in the methods and techniques of teaching recreational skills to the retarded. Valuable laboratory experiences involving working with the retarded in a Day Camp setting will provide students with practical problems in special techniques for the retarded child.

The workshop will meet daily, Monday to Friday, 9:00 a.m. to 3:00 p.m., June 8 through July 3. Amount of time spent in laboratory sessions will determine credit which can be obtained. Students must attend the complete morning session; full credit may be received only through completion of the entire daily program.

TYPEWRITING DEMONSTRATION FOR BUSINESS EDUCATION TEACHERS

The College of Education offers the business teacher registered during the summer session an opportunity to observe pupils at work in a typewriting class. These observations will aid the classroom teacher in: (1) designing purposeful classroom activities for developing basic typewriting skills, (2) planning with the pupil the organization of an effective set of "work" habits, (3) analyzing through case studies the methods of dealing with the various aspects of individual pupil progress, (4) applying the principles of the psychology of skills to the teaching of typewriting, and (5) developing improved methods for course construction, selection of instructional materials, and measuring pupil achievement.

COURSE OFFERINGS

An "S" before a course number denotes that the course is offered in Summer School only. An "S" after a course number indicates a regular course modified for offering during the summer session. A more complete course description may be found in the respective College catalogues.

The University may find it necessary to cancel courses when warranted, due to low enrollment. In general, freshman and sophomore courses will not be maintained for classes smaller than 20. Minimum enrollments for upper level undegraduate courses and graduate courses will be 15 and 10 respectively.

AGRICULTURE

AGRICULTURAL ECONOMICS

A.E. 198. Special Problems. (1-2) (2 cr. max.)

Arranged. Concentrated reading and study in some phase or problem in Agricultural Economics. Not for graduate credit. (Staff.)

Farm Business Analysis. June 22-25 (Stevens) Agricultural Policy. Aug. 3-7. (Marshall.)

A.E. 301. Special Problems in Agricultural Economics. (1-2) (4 cr. max.)

Arranged. Intensive study and analysis of specific problems in the field of Agricultural Economics, which will provide information in depth in areas of special interest to the student. (Staff.)

A.E. 399. Research. (6 cr. M.S., additional 12 cr. Ph.D.)

Arranged. Advanced research in Agricultural Economics. Credit according to work accomplished. (Staff.)

AGRICULTURAL ENGINEERING

Agr. Engr. 198. Special Problems in Farm Mechanics. (1-3)

Arranged. Prerequisite, approval of department. Not acceptable for majors in agricultural engineering. Problems assigned in proportion to amount of credit. (Gienger.)

Agr. Engr. 301. Special Problems in Agricultural Engineering. (1-6)

Arranged. Work assigned in proportion to amount of credit. (Staff.)

Agr. Engr. 399. Research. (1-6)

Arranged. Credit according to work accomplished. (Staff.)

AGRICULTURAL AND EXTENSION EDUCATION

R.ED. 170, 171. CONSERVATION OF NATURAL RESOURCES. (3, 3)

Six weeks, June 22-July 31. Arranged; E-103. Fee, $35.00. Designed primarily for teachers. Study of State's natural resources—soil, water, fisheries, wildlife, forests and minerals—and natural resource problems and practices. Extensive field study. First course concentrates on subject matter, second includes methods of teaching conservation. Courses taken concurrently in summer session. (Erickson.)

R.ED. 180, 181. CRITIQUE IN RURAL EDUCATION. (1, 1)

Arranged. Prerequisite, approval of staff. Current problems and trends in rural education. (Staff.)

R.ED. 198. SPECIAL PROBLEMS IN AGRICULTURAL EDUCATION. (1-3)

Arranged. Prerequisite, approval of staff. Credit in accordance with amount of work planned. A course designed for advanced undergraduates for problems in teaching vocational agriculture. (Staff.)

R.ED. 207, 208. PROBLEMS IN RURAL EDUCATION. (2, 2)

July 6-31. Consideration of current problems and topics in rural education. (Addison, Cardozier.)

R.ED. 301. FIELD PROBLEMS IN RURAL EDUCATION. (1-3)

Arranged. Prerequisite, six semester hours of graduate study. Problems accepted depend upon the character of the work of the student and the facilities available for study. Periodic conferences required. Final report must follow accepted pattern for field investigations. (Staff.)

R.ED. 399. RESEARCH. (1-6)

Arranged. Credit according to work accomplished. (Staff.)

AGRONOMY

AGRON. 198. SPECIAL PROBLEMS IN AGRONOMY. (1)

For advanced undergraduates only. Prerequisite, Agron. 10, 107, 108 or permission of instructor. A detailed study, including a written report of an important problem in agronomy. (Staff.)

AGRON. 208. RESEARCH METHODS. (2)

Prerequisite, permission of staff. Development of research viewpoint by detailed study and report on crop research of the Maryland Experiment Station or review of literature on specific phases of a problem. (Staff.)

AGRON. 399. RESEARCH IN AGRONOMY.

Arranged. Credit according to work accomplished. (Staff.)

ANIMAL SCIENCE

AN.SC. 198. SPECIAL PROBLEMS IN ANIMAL SCIENCE. (1-2) (4 cr. max.)

Arranged. Prerequisite, approval of staff. A course assigned in proportion to amount of credit. A course designed for advanced undergraduates in which specific problems relating to animal science will be assigned. Work assigned in proportion to amount of credit. (Staff.)

AN.SC. 301. SPECIAL PROBLEMS IN ANIMAL SCIENCE. (1-2) (4 cr. max.)

Arranged. Prerequisite, approval of staff. Problems will be assigned which relate specifically to the character of work the student is pursuing. Work assigned in proportion to amount of credit. (Staff.)

AN.SC. 399. RESEARCH. (1-8)

Arranged. Students will be required to pursue original research in some phase of animal science, carrying the same to completion, and report the results in the form of a thesis. Work assigned in proportion to amount of credit.

ASTRONOMY

(See PHYSICS and ASTRONOMY)

BOTANY

BOT. 1. GENERAL BOTANY. (4)

June 22-Aug. 14. Lectures M.T.Th.F., 8-8:50 a.m.; A-1. Laboratory periods, Sec. 1—M.T.Th.F., 9-10:50; Sec. 2—11:00-12:50; E. 212. Laboratory fee, $6.00. General introduction to botany. Emphasis is on the fundamental biological principles of the higher plants. (Brown, Assistants.)

BOT. 151-S. TEACHING METHODS IN BOTANY. (2)

June 22-Aug. 14. Lecture-laboratory periods; M.T.Th.F., 1:00 to 2:50, E-212; A study of the biological principles of common plants employing the apparatus, demonstrations, experiments and visual aids suitable for teaching these principles in high school biology classes. Material from all three versions of the B.S.C.S. programs will be used where appropriate. Laboratory fee, $5.00. (Lockard.)

BOT. 153. FIELD BOTANY AND TAXONOMY. (2)

June 22-Aug. 14. Prerequisite, Bot. 1 or General Biology. Laboratory periods, M.T.Th.F., 1:00-2:50; E-308. Laboratory fee, $5.00. The identification of trees, shrubs, and herbs, emphasizing the native plants of Maryland. Numerous short field trips will be taken. Each student will make an individual collection. (Brown.)

BOT. 195. TUTORIAL READINGS IN BOTANY (HONORS COURSE). (2 or 3)

Arranged. Prerequisite, admission to the Department of Botany Honors Program. Literature review on a specific topic. (Galloway, Staff.)

BOT. 196. RESEARCH PROBLEMS IN BOTANY (HONORS COURSE). (2 or 3)

Arranged. Prerequisite, Bot. 195. Laboratory fee, $10.00. Pursuit of a research problem under faculty supervision. (Galloway, Staff.)

Bot. 199-S. National Science Foundation Summer Institute for Teachers of Biology Seminar. (2)

June 22-Aug. 14. Two-hour sessions, morning and afternoon, or all day visitation on Wednesdays. Includes lectures, discussions, laboratory demonstrations and visitations in the fields of the biological sciences, especially designed for high school teachers and open only to participants in the National Science Foundation Institute. Student participation will be encouraged. Laboratory fee, $5.00. (Lockard.)

Bot. 399. Research. (1-6)

Arranged. Credit according to work done. (Staff.)

ENTOMOLOGY

Ent. S-121. Entomology for Science Teachers. (4)

June 22-Aug. 14. Lectures M.T.Th.F., 8:00-8:50; 0-120. Laboratory periods, M.T.Th.F., 9:00-10:50; 0-200. This course will include the elements of morphology, taxonomy and biology of insects using examples commonly available to high school teachers. It will include practice in collecting, preserving, rearing and experimenting with insects. (Riedel.)

Ent. 198. Special Problems. (1-3)

Arranged. Credit and prerequisites determined by the department. Investigation of assigned entomological problems. (Staff.)

Ent. 301. Advanced Entomology.

Arranged. Credit and prerequisite determined by the department. Independent studies of selected entomological problems with appropriate supervision. (Staff.)

Ent. 399. Research. (1-6)

Arranged. Credit determined by the department. Thesis research. (Staff.)

HORTICULTURE

Hort. 198. Special Problems. (2)

Arranged. For major students in horticulture or botany. Credit according to work accomplished. Four credits maximum.

Hort. 399. Advanced Horticultural Research. (2-12)

Arranged. Credit arranged according to work accomplished.

ARTS AND SCIENCES

ART

ART 1. BASIC DRAWING. (3)

June 22-Aug. 14. M.T.Th.F., 8:00-9:20; A-307.
Drawing preparatory to life and portrait drawing and painting. Stress is placed on fundamental principles, such as the study of relative proportions, values and modeling, etc. (O'Connell.)

ART 5. BASIC DESIGN. (3)

June 22-Aug. 14. M.T.Th.F., 11:00-12:20; A-7.
A basic course in design for beginners consisting of the theory and practice of design. Theory of design deals with design elements such as line, shape, form, etc., and design principles such as contrast, balance, rhythm, etc. Design practice consists of working with pencil, pen, water color, casein, and other media in terms of organization, representation and space. (Freeny.)

ART 9. HISTORY OF ART. (3)

June 22-Aug. 14. M.T.Th.F., 9:30-10:50; A-302.
A survey of the cultures from prehistoric times to the Renaissance, as expressed through painting, sculpture, and architecture. (Grubar.)

ART 13. ELEMENTARY SCULPTURE. (3)

June 22-Aug. 14, M.T.Th.F., 8:00-9:20; A-7.
Study of three-dimensional composition in round and bas-relief. Mediums used: clay, plasteline, wood, plaster, stone. (Freeny.)

ART. 14. ELEMENTARY SCULPTURE. (3)

June 22-Aug. 14. M.T.Th.F., 8:00-9:20; A-7.
Study of three-dimensional compositions in round and bas-relief. Mediums used: clay, plasteline, plaster, wood, stone. (Freeny.)

ART 20. ART APPRECIATION. (2)

June 22-July 31. M.T.Th.F., 8:00-9:20; A-303.
An introduction to the technical and aesthetic problems of the artist. The student becomes acquainted with the elements that go into a work of the visual arts.. He is made aware of the underlying structure that results in the "wholeness" of an art work. He will see examples (originals and reproductions) of master-pieces of art. (Lembach.)

ART 108. MODERN ART. (3)

June 22-Aug. 14. M.T.Th.F., 11:00-12:20; A-303.
A survey of the developments in various schools of modern art. Works of art analyzed according to intrinsic values and historical background. Collections of Washington and Baltimore are utilized. (Grubar.)

ART 110. PRINT MAKING. (3)

June 22-Aug. 14. M.T.Th.F., 9:30-10:50; A-7.
Basic experiences in the various print making media: woodcut, etching, and lithography. Emphasis on a demonstrated understanding of the means of making fine prints. (O'Connell.)

ART 111. PRINT MAKING. (3)

June 22-Aug. 14. M.T.Th.F., 9:30-10:50; A-7.
Development in depth of not more than two print making media leading to a demonstrated capability with the techniques as means of making fine prints. (O'Connell.)

ART 190, 191. SPECIAL PROBLEMS IN ART. (2 OR 3, 2 OR 3)

Arranged. Two three-hour laboratory periods per week, or equivalent work in art history and appreciation. Permission of department head. Designed to offer the advanced art student special instruction in areas not offered regularly by the department. (Staff.)

CHEMISTRY

All laboratory courses in chemistry (except Chem. 214—$20.00) carry a laboratory fee of $12.00; in addition the student is charged for any apparatus which cannot be returned to the stock room in perfect condition.

CHEM. 1. GENERAL CHEMISTRY. (4)

June 22-Aug. 14. M.T.Th.F. Four lectures and four three-hour laboratory periods per week. Lecture, 11:00; C-132. Laboratory, 1:00, 2:00, 3:00; C-119, C-120. Prerequisite, 1 year high school algebra or equivalent. (Boyd.)

CHEM. 3. GENERAL CHEMISTRY. (4)

June 22-Aug. 14. M.T.Th.F. Four lectures and four three-hour laboratory periods per week. Lecture, 11:00; C-130. Laboratory, 1:00-2:00, 3:00; C-105, C-117, C-118. Prerequisite, Chem. 1. (Staff.)

CHEM. 19. ELEMENTS OF QUANTITATIVE ANALYSIS. (4)

June 22-Aug. 14. M.T.Th.F. Four lectures and four laboratory periods per June 22-Aug. 14. M.T.Th.F. Four lectures per week, 8:00; C-134. Prerequisite, Chem. 3. (Stuntz.)

CHEM. 37. ELEMENTARY ORGANIC CHEMISTRY. (2)

June 22-Aug. 14. M.T.Th.F. Four lectures per week, 8:00; C-134. Prerequisite, Chem. 35. (Henery-Logan.)

CHEM. 38. ELEMENTARY ORGANIC LABORATORY. (2)

June 22-Aug. 14. M.T.Th.F. Four three-hour laboratory periods per week. 9:00, 10:00, 11:00; C-221. Prerequisite, Chem. 36. (Henery-Logan.)

CHEM. 111. CHEMICAL PRINCIPLES. (4)

June 22-Aug. 14. M.T.Th.F. Four lectures and four three hour laboratory periods per week. Lecture, 8:00; C-132. Laboratory, 9:00, 10:00, 11:00; C-108. Prerequisite, Chem. 1 and 3, or equivalent. A course in the principles of chemistry with accompanying laboratory work consisting of simple quantitative experiments. Not open to students seeking a major in the physical sciences. (Credit applicable only toward degree in College of Education.) (Jaquith.)

CHEM. 192, 194. GLASSBLOWING LABORATORY. (1, 1)

June 22-July 31. Two four-hour laboratory periods a week. M., W., 1:00, 2:00, 3:00, 4:00; C-B3. (Carruthers.)

CHEM. 399. RESEARCH.

(Staff.)

CLASSICAL LANGUAGES AND LITERATURES

LATIN 102. TACITUS. (3)

June 22-Aug. 14. M.T.Th.F., 9:30-10:50; LL-1. Lectures and readings on Greek and Roman historiography before Tacitus and on the author as a writer of history. The reading of selections from the Annals and Histories. Reports.

(Avery.)

ENGLISH

ENG. 1, 2. COMPOSITION AND AMERICAN LITERATURE. (3, 3)

Eng. 1 is the prerequisite of Eng. 2. June 22-August 14. (Herman, Staff.)

ENG. 1—

Section 1—M.T.Th.F., 8:00- 9:20; A-133
Section 2—M.T.Th.F., 9:30-10:50; A-133
Section 3—M.T.Th.F., 9:30-10:50; A-49
Section 4—M.T.Th.F., 11:00-12:20; A-48

ENG. 2—

Section 1—M.T.Th.F., 8:00- 9:20; A-159
Section 2—M.T.Th.F., 9:30-10:50; A-159
Section 3—M.T.Th.F., 9:30-10:50; A-161
Section 4—M.T.Th.F., 11:00-12:00; A-159

ENG. 3, 4. COMPOSITION AND WORLD LITERATURE. (3, 3)

Prerequisite, Eng. 2 or 21. June 22-August 14. (Gravely, Staff.)
Section 1—M.T.Th.F., 8:00- 9:20; A-163
Section 2—M.T.Th.F., 8:00- 9:20; A-49
Section 3—M.T.Th.F., 9:30-10:50; A-163
Section 4—M.T.Th.F., 9:30-10:50; A-164
Section 5—M.T.Th.F., 11:00-12:20; A-163

ENG. 4—

Section 1—M.T.Th.F., 8:00- 9:20; A-167
Section 2—M.T.Th.F., 8:00- 9:20; A-174
Section 3—M.T.Th.F., 9:30-10:50; A-167
Section 4—M.T.Th.F., 9:30-10:50; A-174
Section 5—M.T.Th.F., 11:00-12:20; A-167
Section 6—M.T.Th.F., 11:00-12:20; A-174

Eng. 101. History of the English Language. (3)
June 22-August 14. M.T.Th.F., 8:00-9:20; A-161. Prerequisite, Eng. 4 or equivalent. (James.)

Eng. 115. Shakespeare. (3)
June 22-August 14. M.T.Th.F., 9:30-10:50; A-12. Prerequisite, Eng. 4 or equivalent. Outstanding plays to Shakespeare's mid-career. (Zeeveld.)

Eng. 125. Literature of the Eighteenth Century. (3)
June 22-July 31. Daily, 8:00-9:20; A-164. Prerequisite, Eng. 4 or equivalent. The Age of Pope and Swift. (Myers.)

Eng. 134. Literature of the Victorian Period. (3)
June 22-August 14. M.T.Th.F., 11:00-12:20; A-164. Prerequisite, Eng. 4 or equivalent. Major Victorian prose writers. (Jerman.)

Eng. 139. The English Novel. (3)
June 22—August 14. M.T.Th.F., 11:00-12:20; A-161. Prerequisite, Eng. 4 or equivalent. Six major eighteenth century writers. (Ward.)

Eng. 143. Modern Poetry. (3)
June 22-July 31. Daily, 8:00-9:20; A-166. Prerequisite, Eng. 4 or equivalent. (Portz.)

Eng. 150. American Literature. (3)
June 22-August 14. M.T.Th.F., 9:30-10:50; A-166. Prerequisite, Eng. 4 or equivalent. American prose and poetry to 1850. (Bode.)

Eng. 155. Major American Writers. (3)
June 22-August 14. M.T.Th.F., 11:00-12:20; A-166. Prerequisite, Eng. 4 or equivalent. Melville and Emerson. (Lutwack.)

Eng. 160. Advanced Expository Writing. (3)
June 22-July 31. Daily, 9:30 10:20; A-170. Prerequisite, Eng. 4 or equivalent. (Myers.)

Eng. 206. Seminar in Renaissance Literature. (3)
June 22-August 14. M., Th., 1:30-3:30 p.m.; A-48. (Zeeveld.)

Eng. 226. Seminar in American Literature. (3)
June 22-August 14. M., Th., 7:00-9:30 p.m.; A-170. (Bode.)

Eng. 230. Special Studies in English Literature. (3)
June 22-August 14. T., F., 1:30-3:30 p.m.; A-48. Directed readings in nineteenth century writers. (Jerman.)

FOREIGN LANGUAGES

French 0. Elementary French for Graduate Students. (0 or audit)
June 22-July 31. Daily, 8:00 to 9:20; LL-2. (Hall.)

FRENCH 1-2. ELEMENTARY FRENCH. (3, 3)
June 22-Aug. 14. Daily, 8:00 to 9:20 and 12:30 to 1:20; LL-4. In addition each student will have one 50-minute drill daily. Students enrolled in this course may not take other courses in the summer session. (Demaitre.)

FRENCH 6. INTERMEDIATE FRENCH. (3)
June 22-July 31. Daily, 9:30 to 10:50; LL-106. (Bingham.)

FRENCH 7. INTERMEDIATE FRENCH. (3)
June 22-July 31. Daily, 9:30 to 10:50; LL-105. (Hall.)

FRENCH 125. FRENCH LITERATURE OF THE EIGHTEENTH CENTURY. (3)
June 22-July 31. Daily, 11 to 12:20; LL-220. Conducted in French. Prerequisite, French 75. (Bingham.)

GERMAN 0. ELEMENTARY GERMAN FOR GRADUATE STUDENTS. (0 OR AUDIT)
June 22-July 31. Sec. 1, Daily, 8:00 to 9:20; LL-13; Sec. 2, Daily, 9:30 to 10:50; LL-13. (Dobert, Hering.)

GERMAN 1-2. ELEMENTARY GERMAN. (3, 3)
June 22-Aug. 14. Daily, 8:00 to 9:20 and 12:30 to 1:20; LL-204. In addition each student will have one 50-minute drill daily. Students enrolled in this course may not take other courses in the summer session. (Kemner.)

GERMAN 6. INTERMEDIATE GERMAN. (3)
June 22-July 31. Daily, 11:00 to 12:20; LL-201. (Dobert.)

GERMAN 7. INTERMEDIATE GERMAN. (3)
June 22-July 31. Daily, 11:00 to 12:20; LL-203. (Hering.)

SPANISH 1-2. ELEMENTARY SPANISH. (3, 3)
June 22-Aug. 14. Daily, 8:00 to 9:20 and 12:30 to 1:20; LL-301. In addition each student will have one 50-minute drill daily. Students enrolled in this course may not take other courses in the summer session. (Rodriguez.)

SPANISH 6. INTERMEDIATE SPANISH. (3)
June 22-July 31. Daily, 9:30 to 10:50; LL-319. (Herdoiza.)

SPANISH 7. INTERMEDIATE SPANISH. (3)
June 22-July 31. Daily, 9:30 to 10:50; LL-116. (Moncayo.)

SPANISH 111. POETRY OF THE SIXTEENTH AND SEVENTEENTH CENTURIES. (3)
June 22-July 31. Daily, 9:30 to 10:50; LL-2. Conducted in Spanish. Prerequisite, Spanish 75. (Goodwyn.)

CHINESE 1-2. ELEMENTARY CHINESE. (3, 3)
June 22-Aug. 14. Daily, 8:00 to 9:20 and 11:00 to 11:50; LL-3. Supplemented by required electronic laboratory sessions. Students enrolled in this course may not take other courses in the summer session. (Chen.)

RUSSIAN 1-2. ELEMENTARY RUSSIAN. (3, 3)

June 22-Aug. 14. Daily, 9:30 to 10:50 and 12:30 to 1:20; LL-104. Students enrolled in this course may not take other courses in the summer session.
(Hitchcock.)

HISTORY

H. 5. HISTORY OF AMERICAN CIVILIZATION. (3)

June 22-Aug. 14

Section 1— 8:00- 9:20; A-106	(Van Ness.)
Section 2— 8:00- 9:20; A-110	(Staff.)
Section 3— 9:30-10:50; A-106	(Wellborn.)
Section 4— 9:30-10:50; A-110	(Chatelain.)
Section 5—11:00-12:20; A-106	(Wellborn.)
Section 6—11:00-12:20; A-110	(Staff.)

H. 6. HISTORY OF AMERICAN CIVILIZATION. (3)

June 22-Aug. 14

Section 1— 8:00- 9:20; A-130	(Isaacs.)
Section 2— 9:30-10:50; A-207	(Isaacs.)
Section 3— 9:30-10:50; A-130	(Campbell.)
Section 4—11:00-12:20; A-130	(Staff.)

H. 41. WESTERN CIVILIZATION. (3)

June 22-Aug. 14. This course is designed to give the student an appreciation of the civilization in which he lives in its broadest setting. The study begins with the collapse of classical civilization and comes to the seventeenth century.

Section 1—8:00- 9:20; A-207	(Robertson.)
Section 2—9:30-10:50; A-209	(Robertson.)

H. 42. WESTERN CIVILIZATION. (3)

June 22-Aug. 14. This course is designed to give the student an appreciation of the civilization in which he lives in its broadest setting. The study begins with the seventeenth century and comes to the present.

Section 1— 9:30-10:50; A-228	(Staff.)
Section 2—11:00-12;20; A-209	(Staff.)

H. 61. FAR EASTERN CIVILIZATION. (3)

June 22-Aug. 14. 9:30-10:50; A-231. This course seeks to give the student an understanding of a great civilization radically different from our own and an appreciation of the complex problems of the Far East and of American policy there. The approach is interdisciplinary within an historical framework.
(Farquhar.)

H. 119. RECENT AMERICAN HISTORY. (3)

June 22-Aug. 14. 11:00-12:20; A-231. Prerequisite, H. 5, 6 or the equivalent. Part politics, domestic issues, foreign relations of the United States since World War I.
(Merrill.)

H. 124. RECONSTRUCTION AND THE NEW NATION, 1865-1896. (3)
June 22-Aug. 14. 9:30-10:50; Q-28. Prerequisite, H. 5, 6 or equivalent. Problems of construction in both South and North. Emergence of big business and industrial combinations. Problems of the farmer and laborer. (Franklin.)

H. 133. THE HISTORY OF IDEAS IN AMERICA. (3)
June 22-Aug. 14. 8:00-9:20; A-231. Prerequisite, H. 5, 6 or equivalent. An intellectual history of the American people, embracing such topics as liberty, democracy and social ideas. (Conkin.)

H. 142. HISTORY OF MARYLAND. (3)
June 22-Aug. 14. 8:00-9:20; A-209. Prerequisite, H. 5, 6 or equivalent. Maryland's historical development and role as a state in the American Union. (Chatelain.)

H. 160. HISTORY OF EUROPEAN IDEAS. (3)
June 22-Aug. 14. 11:00-12:20; A-228. Prerequisites, H. 41, 42, or H. 53, 54 or the equivalent. The courses will present important currents of thought during the nineteenth and twentieth centuries. (Stromberg.)

H. 170. EUROPE IN THE NINETEENTH CENTURY, 1815-1919. (3)
June 22-Aug. 14. 9:30-10:50; A-16. Prerequisites, H. 41, 42 or H. 53, 54 or equivalent. A study of the political, economic, social and cultural development of Europe from the Franco-Prussian War to the end of World War I. (Bauer.)

H. 200. HISTORIOGRAPHY: TECHNIQUES OF HISTORICAL RESEARCH AND WRITING. (3)
An introduction to the professional study of history, including an examination of the sources and nature of historical knowledge, historical criticism, and synthesis. Required of all candidates for advanced degrees in history.
Section 1—Arranged. (Stromberg.)
Section 2—Arranged. (Conkin.)

H. 208. SEMINAR IN RECENT AMERICAN HISTORY. (3)
Arranged. Emphasis will be placed on the period since 1900. (Merrill.)

H. 217. SEMINAR IN RECONSTRUCTION AMERICA. (3)
Arranged. A seminar on problems resulting from the Civil War: political, social, and economic reconstruction. (Franklin.)

H. 269. SEMINAR IN NINETEENTH CENTURY EUROPE. (3)
Arranged. A seminar on problems in the history of western Europe during the nineteenth century. (Bauer.)

H. 399. THESIS RESEARCH. (1-6)
Arranged.

MATHEMATICS

MATH. 10. INTRODUCTION TO MATHEMATICS. (3)

Prerequisite, 2½ years of college preparatory mathematics or Math. 1. Open to students not majoring in mathematics or the physical and engineering sciences. Logic, sets, counting, probability; elementary algebraic and transcendental functions and their geometric representation; systems of linear equations, vectors, matrices.

Section 1—June 22-Aug. 14; M.T.Th.F., 8:00- 9:20; Y-5 (Staff.)
Section 2—June 22-Aug. 14; M.T.Th.F., 9:30-10:50; Y-3 (Staff.)
Section 3—June 22-Aug. 14; M.T.Th.F., 9:30-10:50; Y-15 (Staff.)
Section 4—June 22-Aug. 14; M.T.Th.F., 11:00-12:20; Y-16 (Staff.)

MATH. 11. INTRODUCTION TO MATHEMATICS. (3)

Prerequisite, Math. 10. Math. 11 is a continuation of Math. 10.

Section 1—June 22-Aug. 14; M.T.Th.F., 8:00- 9:20; Y-2 (Staff.)
Section 2—June 22-Aug. 14; M.T.Th.F., 9:30-10:50; Y-16 (Staff.)
Section 3—June 22-Aug. 14; M.T.Th.F., 11:00-12:20; Y-5 (Staff.)

MATH. 18. INTRODUCTORY ANALYSIS. (3)

Prerequisite, 2½ years of college preparatory mathematics or Math. 1. An introductory course for students not qualified to start Math. 19. Real numbers, functions, coordinate systems. Trigonometric functions. Plane analytic geometry.

Section 1—June 22-Aug. 14; M.T.Th.F., 8:00- 9:20; Y-4 (Staff.)
Section 2—June 22-Aug. 14; M.T.Th.F., 11:00-12:20; Y-4 (Staff.)

MATH. 19. ELEMENTARY ANALYSIS. (4)

Prerequisite, 3½ years of college preparatory mathematics or Math. 18. Vectors and analytic geometry in three dimensions. Review of real numbers, coordinate systems, trigonometric functions, determinants.

Section 1—June 22-Aug. 14; Daily, 9:30-10:50; Y-14 (Staff.)
Section 2—June 22-Aug. 14; Daily, 9:30-10:50; Y-121 (Staff.)
Section 3—June 22-Aug. 14; Daily, 9:30-10:50; Y-17 (Staff.)

MATH. 20. CALCULUS I. (4)

Prerequisite, Math. 19 or equivalent.

Section 1—June 22-Aug. 14; Daily, 8:00-9:20; Y-16 (Staff.)
Section 2—June 22-Aug 14; Daily, 8:00-9:20; Y-15 (Staff.)

MATH. 21. CALCULUS II. (4)

Prerequisite, Math. 20 or equivalent.

Section 1—June 22-Aug. 14; Daily, 9:30-10:50; Y-4 (Staff.)
Section 2—June 22-Aug. 14; Daily, 9:30-10.50; Y-5 (Staff.)

MATH. 30. ELEMENTS OF MATHEMATICS. (4)

Prerequisite, high school elementary algebra. Required course in mathematics for elementary education majors and open only to students in this field. Topics from algebra and number theory are presented to provide a proper mathematical insight into arithmetic for the prospective elementary school teacher.

Section 1—June 22-Aug. 14; Daily, 8:00- 9:20; Y-18 (Staff.)
Section 2—June 22-Aug. 14; Daily, 9:30-10:50; Y-18 (Staff.)

MATH. 31. ELEMENTS OF GEOMETRY. (4)
June 22-Aug.14. Daily, 11:00-12:20; Y-2. (Staff.)
Prerequisite, Math. 30 or equivalent. Required course in mathematics for elementary education majors and open only to students in this field. Topics included are: review of the structure of a mathematical system, a mathematical system of sets, non-metric geometry, logic, congruence, measurement, similarity, graphs on a plane, a miniature geometry, spherical geometry.

MATH. 64. DIFFERENTIAL EQUATIONS FOR ENGINEERS. (3)
June 22-Aug. 14. M.T.Th.F., 9:30-10:50; Y-2. (Staff.)
Prerequisite, Math. 21 or equivalent.

MATH. 128. EUCLIDEAN GEOMETRY. (3)
June 22-Aug. 14. M.T.Th.F., 9:30-10:50; Y-122. (Staff.)
Prerequisite, Math. 21 or equivalent. Open only to teachers or undergraduates preparing to teach or with emphasis on the teaching of mathematics and science.

MATH. 181. INTRODUCTION TO NUMBER THEORY. (3)
June 22-July 31. Daily, time to be arranged; U-115. (Staff.)
Open only to participants in the N.S.F. Institute in Mathematics for Elementary School Teachers.

MATH. 182. INTRODUCTION TO ALGEBRA. (3)
June 22-July 31. Daily, 8:30-9:50; Y-101. (Good, Staff.)
Open only to participants in the N.S.F. Institute in Mathematics for Junior High School Teachers of Mathematics.

MATH. 183. INTRODUCTION TO GEOMETRY. (3)
June 22-July 31. Daily, time to be arranged; U-115. (Staff.)
Open only to participants in the N.S.F. Institute in Mathematics for Elementary School Teachers.

MATH. 185. SELECTED TOPICS FOR TEACHERS OF MATHEMATICS. (3)
June 22-Aug. 14. M.T.Th.F., 11:00-12:20; Y-122. (Staff.)
Prerequisite, one year of college mathematics or consent of instructor. Open only to students in the graduate program with emphasis on the teaching of mathematics and science.

MATH. 189. NATIONAL SCIENCE FOUNDATION SUMMER INSTITUTE FOR TEACHERS OF SCIENCE AND MATHEMATICS SEMINAR. (3)
June 22-July 31. Daily, 10:10-11:30; Y-101. (Good, Staff.)
Open only to participants in the N.S.F. Institute in Mathematics for Junior High School Teachers in Mathematics.

MICROBIOLOGY

MICROB. 1. GENERAL MICROBIOLOGY. (4)
June 22-Aug. 14. Four lectures and four two-hour laboratory periods a week. Lecture, 8:00; F-101. Laboratory, 9:00, 10:00, M.T.Th.F.; T-210. Laboratory

fee, $15.00. The physiology, culture, and differentiation of bacteria. Fundamental principles of microbiology in relation to man and his environment. (Whitman.)

MICROB. 181. MICROBIOLOGICAL PROBLEMS. (3)

June 22-Aug. 14. Six two-hour laboratory periods a week. Arranged. Prerequisite. 16 credits in microbiology. Registration only upon consent of the instructor. Laboratory fee, $15.00. (Faber.)

MICROB. 399. RESEARCH.

Arranged. Credits according to work done. Laboratory fee, $15,00. (Staff.)

MUSIC

See Music Education, page 57

MUSIC 16. MUSIC FUNDAMENTALS FOR THE CLASSROOM TEACHER. (3)

June 22-July 31. Daily, 9:30-10:50; B-7. The fundamentals of music theory and practice related to the needs of the classroom and kindergarten teacher. (de Vermond.)

MUSIC 20. SURVEY OF MUSIC LITERATURE. (3)

June 22-July 31. Daily, 11:00-12:20; HH108. A study of musical principles and an introduction to musical repertoires. Beginning course. (Heim.)

MUSIC 167. SYMPHONIC MUSIC. (3)

June 22-July 31. Daily, 11:00-12:20; B-1. Prerequisite, Mus. 120, 121 or equivalents. Orchestral music from the Baroque period to the present. (McCorkle.)

MUSIC 200. ADVANCED STUDIES IN THE HISTORY OF MUSIC. (3)

June 22-July 31. Daily, 8:00-9:20; B-9. Prerequisites, Mus. 120, 121 or equivalents. In the 1964 summer session the Renaissance period will be studied. (Bernstein.)

MUSIC 201. SEMINAR IN MUSICOLOGY. (3)

June 22-July 31. Daily, 11:00-12:20; B-1. Prerequisites, Mus. 120, 121 or equivalents. In the 1964 summer session the music of Brahms will be studied. (McCorkle.)

APPLIED MUSIC

June 22-August 14. A student taking applied music for the first time at this University should register for Music 999. He will receive the proper classification at the end of the summer session.

Every student taking an applied music course should, in addition to registering for the proper course number, indicate the instrument chosen by adding a section number as follows:

Sec. 1, Piano	Sec. 7, Flute	Sec. 12, Trumpet
Sec. 2, Voice	Sec. 9, Clarinet	Sec. 13, Trombone
Sec. 3, Violin	Sec. 11, Horn	Sec. 15, Organ

MUSIC 12, 13, 52, 53, 112, 113, 152, 153. APPLIED MUSIC. (2 EACH COURSE)

Hours to be arranged with instructor on first day of classes; B-4. Prerequisite, the next lower course in the same instrument. Two one-hour lessons and a minimum of twelve practice hours per week for eight weeks. Supplementary fee of $40.00 for each course. (Staff.)

PHILOSOPHY

PHIL. 1. INTRODUCTION TO PHILOSOPHY. (3)

June 22-Aug. 14. 9:30-10:50; LL-302. (Messenger.)

PHIL. 53. PHILOSOPHY OF RELIGION. (3)

June 22-Aug. 14. 11:00-12:20; LL-302. (Messenger.)

PHIL. 292. SELECTED PROBLEMS IN PHILOSOPHY. (1-3)

Arranged. Credit according to work accomplished. (Staff.)

PHIL. 399. RESEARCH. (1-3)

Arranged. Credit according to work accomplished. (Staff.)

PHYSICS AND ASTRONOMY

ASTRONOMY 1. INTRODUCTION TO ASTRONOMY. (3)

June 22-July 31. Lecture, M.T.W., 7:30-9:00 P.M.; Laboratory, Th., 7:30-9:30 P.M.; Z-115. An elementary course in descriptive astronomy. This course is self-contained; it is not required that it be followed by Astronomy 2. Lecture demonstration fee, $3 per semester. (Upgren.)

ASTRONOMY 150. SPECIAL PROBLEMS IN ASTRONOMY.

June 22-Aug. 14. Arranged. Prerequisite, major in physics or astronomy and/or consent of advisor. Research or special study. Credit according to work accomplished. (Staff.)

ASTRONOMY 190. HONORS SEMINAR.

June 22-Aug. 14. Arranged. Enrollment is limited to students admitted to the Honors Programs in Astronomy. Credit according to work accomplished. (Staff.)

ASTRONOMY 399. RESEARCH.

June 22-Aug. 14. Arranged. Laboratory fee, $10 per credit hour. Prerequisite, an approved application for admission to candidacy or special permission of the Department of Physics and Astronomy. Credit according to work accomplished. (Staff.)

PHYSICS 106. THEORETICAL MECHANICS. (3)

June 22-Aug. 14. M.T.Th.F., 9:30-10:50; C-134. Prerequisite, Physics 20, 21 or consent of instructor. A study of Newtonian mechanics, appropriate for those who have some familiarity with calculus. (Undergraduate physics majors are normally advised to take the parallel course, Physics 127; those wishing to enroll in Physics 106 first should consult their advisor.) (Estabrook.)

*PHYSICS 130, 131. BASIC CONCEPTS OF PHYSICS. (2, 2)

June 22-Aug. 14. M.T.Th.F., 9:10-10:50; C-130. Prerequisite, junior standing. Lecture demonstration fee, $4.00. The concepts of physics, their evolution, and their relation to other branches of human endeavor. Intended for teachers. A primarily descriptive course that does not satisfy the requirement of professional schools or serve as a substitute for other physics courses. This course should be taken concurrently with Physics 150, Section 2. (Staff.)

PHYSICS 150. SPECIAL PROBLEMS IN PHYSICS. SECTION 1.

June 22-Aug. 14. Arranged. Research or special study. Laboratory fee, $10.00 per credit hour when appropriate. Prerequisite, major in physics and consent of Department Head. Credit according to work accomplished. (Staff.)

*PHYSICS 150. SPECIAL PROBLEMS IN PHYSICS. SECTION 2. BASIC EXPERIMENTS. (2)

June 22-Aug. 14. Two 4-hour laboratories a week. T.F. 2-6. Z-315. The course should be taken concurrently with Physics 130, 131. It will consist of fundamental laboratory experiments in physics. (Staff.)

PHYSICS 190. INDEPENDENT STUDIES SEMINAR.

June 22-Aug. 14. Arranged. (Staff.)

PHYSICS 230. SEMINAR. (1)

June 22-Aug. 14. Arranged. One two-hour class per week. (Faculty.)

PHYSICS 248. SPECIAL TOPICS IN MODERN PHYSICS. (2)

June 22-Aug. 14. Arranged. Two two-hour lectures per week. (Faculty.)

PHYSICS 399. RESEARCH.

June 22-Aug. 14. Credit according to work accomplished. Laboratory fee, $10.00 per credit hour. Prerequisite, approved application for admission to candidacy or special permission of the Department Chairman. Thesis research conducted under approved supervision. (Faculty.)

PSYCHOLOGY

PSYCH. 1. INTRODUCTION TO PSYCHOLOGY. (3)

June 22-Aug. 14. Two sections: Section 1—8:00-9:20; M-105. Section 2—9:30-10:50; A-52. A basic introductory course intended to bring the student into contact with the major problems confronting psychology and the more important attempts at their solution. (Heermann, Waldrop.)

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*Intended for teachers.

PSYCH. 90. STATISTICAL METHODS IN PSYCHOLOGY. (3)
June 22-Aug. 14. 8:00-9:20; A-52. Prerequisite, Psych. 1 and Math. 1, 5, or 10 equivalent. A basic introduction to quantitative methods used in psychological research. (Heermann.)

PSYCH. 110. EDUCATIONAL PSYCHOLOGY. (3)
June 22-Aug. 14. 11:00-12:20; A-52. Prerequisite, Psych. 1 or equivalent. Researches on fundamental psychological problems encountered in education. Measurement and significance of individual differences; learning, motivation, transfer of training, and the educational implications of theories of intelligence. (Waldrop.)

PSYCH. 131. ABNORMAL PSYCHOLOGY. (3)
June 22-Aug. 14. 9:30-10:50; M-105. Prerequisite, two courses in psychology. The nature, diagnosis, etiology, and treatment of mental disorders. (Daston.)

PSYCH. 194. INDEPENDENT STUDY IN PSYCHOLOGY. (1-3)
Arranged. Prerequisite, written consent of individual faculty supervisor. (Staff.)

PSYCH. 195 MINOR PROBLEMS IN PSYCHOLOGY. (1-3)
Arranged. Prerequisite, written consent of individual faculty supervisor. (Staff.)

PSYCH. 225. PRACTICUM IN COUNSELING AND CLINICAL PROCEDURES. (1-3)
Arranged. Requires consent of faculty supervisor. (Staff.)

PSYCH. 260 INDIVIDUAL TESTS. (3)
June 22-Aug. 14. 11:00-12:20, M-105. Prerequisite, Psych. 150 or equivalent. Lab. fee, $4.00. (Daston.)

PSYCH. 288. SPECIAL RESEARCH PROBLEMS. (1-3)
Arranged. Requires consent of faculty supervisor. (Staff.)

PSYCH. 399. RESEARCH FOR THESIS. (1-6)
Arranged. Requires consent of faculty supervisor. (Staff.)

SOCIOLOGY

SOC. 1. INTRODUCTION TO SOCIOLOGY. (3)
June 22-Aug. 14. M.T.Th.F., 8:00-9:20; A-324. An introduction to the study of sociology. (Hirzel, Staff.)

SOC. 2. PRINCIPLES OF SOCIOLOGY. (3)
June 22-Aug. 14. M.T.Th.F., 8:00-9:20; A-321. Prerequisite, Soc. 1. The basic forms of human association and interaction. (Staff.)

SOC. 51. SOCIAL PATHOLOGY. (3)
June 22-Aug. 14. M.T.Th.F., 9:30-10:50; A-258. Prerequisite, Soc. 1. Personal-social disorganization and maladjustment. (Wellford.)

SOC. 52. CRIMINOLOGY. (3)

June 22-Aug. 14. M.T.Th.F., 8:00-9:20; A-320. Prerequisite, Soc. 1. Criminal behavior and the methods of its study. (Toland.)

SOC. 105. CULTURAL ANTHROPOLOGY. (3)

June 22-Aug. 14. M.T.Th.F., 11:00-12:20; A-258. A study of the simpler cultures of the world, with attention to historical processes. (Anderson.)

SOC. 121. POPULATION. (3)

June 22-Aug. 14. M.T.Th.F., 11:00-12:20; A-324. Prerequisite, Soc. 1. Population distribution and growth in the United States and the world. (Hirzel.)

SOC. 125. CULTURAL HISTORY OF THE NEGRO. (3)

June 22-Aug. 14. M.T.Th.F., 8:00-9:20; A-258. Cultures of Africa and cultural adjustments of the Negro in North and South America. (Anderson.)

SOC. 131. INTRODUCTION TO SOCIAL SERVICE. (3)

June 22-Aug. 14. M.T.Th.F., 9:30-10:50; A-324. Prerequisite, Soc. 1. General survey of the field of social-welfare activities. (Di Bella.)

SOC. 153. JUVENILE DELINQUENCY. (3)

June 22-Aug. 14. M.T.Th.F., 11:00-12:20; A-321. Prerequisite, Soc. 1. Juvenile delinquency in relation to the general problem of crime. (Courtless.)

SOC. 164. THE FAMILY AND SOCIETY. (3)

June 22-Aug. 14. M.T.Th.F., 12:30-1:50; A-258. Prerequisite, Soc. 1. The family as a social institution. (Bourdeau.)

SOC. 166. INTERVIEWING AND PROBLEM SOLVING IN SOCIAL WORK. (3)

June 22-Aug. 14. M.T.Th.F., 11:00-12:20; A-320. Prerequisite, Soc. 1. Interviewing and other diagnostic techniques with particular reference to family and child behavior. (Di Bella.)

SOC. 186. SOCIOLOGICAL THEORY. (3)

June 22-Aug. 14. M.T.Th.F., 9:30-10:50; A-321. Prerequisite, Soc. 1. Development of the science of sociology. (Staff.)

SOC. 291. SPECIAL SOCIAL PROBLEMS.

June 22-Aug. 14. Arranged. Credit according to work accomplished. (Staff.)

SOC. 399. THESIS RESEARCH.

June 22-Aug. 14. Arranged. Credit according to work accomplished. (Staff.)

SPEECH

SPEECH 1. PUBLIC SPEAKING. (3)

First and second semesters. Prerequisite for advanced speech courses. Laboratory fee, $1.00. The preparation and delivery of short original speeches; outside readings; reports, etc. It is recommended that this course be taken during the freshman year.

Section 1—June 22-July 31. Daily, 8:00-9:20; R-103. (Starcher.)
Section 2—June 22-Aug. 14. M.T.Th.F., 9:30-10:50; R-102. (Downs.)
Section 3—June 22-July 31. Daily, 11:00-12:20; R-102. (Batka.)
Section 4—June 22-Aug. 14. M.T.Th.F., 11:00-12:20; R-103. (Downs.)

SPEECH 3. FUNDAMENTALS OF GENERAL SPEECH. (3)

June 22-July 31. Daily, 8:00-9:20; R-102. Training in auditory discrimination of speech sounds, rhythms and inflections of general American speech. Analysis of the physiological bases of speech production and the phonetic elements of speech reception. This course is required of speech majors and recommended for foreign students and majors in nursery and elementary education. (Virden.)

SPEECH 105. SPEECH HANDICAPPED SCHOOL CHILDREN. (3)

June 22-July 31. Daily, 9:30-10:50; R-109. Prerequisite, Speech 3 for undergraduates. The occurrence, identification and treatment of speech handicaps in the classroom. An introduction to speech pathology. (Hendricks.)

SPEECH 106. CLINICAL PRACTICE. (1-3)

June 22-July 31. T.F., 12:30-1:50, and arranged; R-109. Prerequisite, Speech 105. A laboratory course dealing with the various methods of correction plus actual work in the clinic. Fee, $1.00 per credit hour. (Shaftel.)

SPEECH 111. SEMINAR. (3)

June 22-July 31. Prerequisites, senior standing and consent of instructor. Present-day speech research. Arranged. (Strausbaugh.)

SPEECH 112. PHONETICS. (3)

June 22-July 31. Daily, 11:00-12:30; R-109. Prerequisite, Speech 3 or consent of instructor. Training in the recognition and production of the sounds of spoken English, with an analysis of their formation. Practice transcription. Mastery of the international phonetic alphabet. Laboratory fee, $3.00. (Staff.)

SPEECH 127. CHILDREN'S DRAMATICS. (3)

June 22-July 31. Daily, 9:30-10:50; R-103. Principles and methods necessary for staging children's productions on the elementary school level. Major emphasis on creative dramatics; the application of creative dramatics in the school room, and the values gained by the child in this activity. Students will conduct classes in formal and creative dramatics which will culminate in children's programs. (Meersman.)

SPEECH 139. THEATRE WORKSHOP. (3)

June 22-July 31. Daily, 9:30-10:50; Radio Studio. Consent of instructor. A laboratory course designed to provide the student with practical experience in all phases of theatre production. (Pugliese.)

SPEECH 141. INTRODUCTION TO AUDIOMETRY. (2)

June 22-July 31. M.T.Th.F., 9:30-10:50; R-101. Laboratory fee, $2.00. Analysis of various methods and procedures in evaluating hearing losses. Required for students whose concentration is in speech and hearing therapy. (Staff.)

SPEECH 149. TELEVISION WORKSHOP. (3)

June 22-July 31. Daily, 11:00-12:20; R-9. Prerequisites, Speech 22, Speech 140, and Speech 148, or consent of instructor. Two hour lecture, four hour laboratory. Laboratory fee, $10.00. (Aylward.)

SPEECH 164. PERSUASION IN SPEECH. (3)

June 22-July 31. Daily, 8:00-9:20; R-101 (6 week). A study of the bases of persuasion with emphasis on recent experimental developments in persuasion. (Weaver.)

SPEECH 201K. SEMINAR, MINOR RESEARCH PROBLEMS. (1-3)

June 22-31. Arranged. Prerequisites, 6 hours in speech pathology and consent of instructor.

SPEECH 211. ADVANCED CLINICAL PRACTICE. (1-3)

June 22-July 31. T.F., 12:30-1:50; R-109 and arranged. Prerequisites, 12 hours in speech pathology and audiology. Supervised training in the application of clinical methods in the diagnosis and treatment of speech and hearing disorders. Laboratory fee, $1.00 per hour. (Shaftel.)

SPEECH 214. CLINICAL AUDIOMETRY. (3)

June 22-July 31. Hours and room arranged. Prerequisites, 3 hours in audiology and consent of instructor. Testing of auditory acuity with pure tones and speech. Laboratory fee, $3.00. (Causey.)

SPEECH 399. THESIS. (1-6 CREDITS)

Arranged. (Staff.)

ZOOLOGY

ZOOL. 1. GENERAL ZOOLOGY. (4)

June 22-Aug. 14. Four 80-minute lectures and two two-hour laboratories a week. Lectures M.T.Th.F., 8:00 to 9:20; F-112; laboratory T.Th., 9:30-10:30; R-203. Zool. 1 and 2 satisfy the freshman pre-medical requirement in general biology. An introduction to the modern concepts of biological principles and animal life. Emphasis will be placed upon the functional aspects of living systems with a survey of the physical and chemical bases of all life processes. (Potter.)

ZOOL. 55S. DEVELOPMENT OF THE HUMAN BODY. (2)

June 22-Aug. 14. Four one-hour lectures a week, M.T.Th.F., 11:00; A-12. A study of the main factors affecting the growth and development of the child with special emphasis on normal development. (Staff.)

ZOOL. 102. GENERAL ANIMAL PHYSIOLOGY. (4)

June 22-Aug. 14. Four one-hour lectures and four three-hour laboratory periods a week. Lectures M.T.Th.F., 8:00-A-12. Laboratory M.T.Th.F., 9, 10, 11; R-112. Prerequisites, one year of zoology and chemistry 31 or 25. The general principles of physiological function as shown in mammals and lower animals. (Grollman.)

ZOOL. 110. GENERAL PARASITOLOGY. (4)

June 22-Aug. 14. Four one-hour lectures and four three-hour laboratory periods a week. Lectures M.T.Th.F., 8:00; A-14. Laboratory M.T.Th.F., 9, 10, 11; R-113. Prerequisites, Zool. 1 and 2 or permission of the instructor. A consideration of the phenomenon of parasitism through a study of the structure, function and host relationships of parasitic organisms. (Rothman.)

ZOOL. 150. SPECIAL PROBLEMS IN ZOOLOGY. (1 OR 2)

Arranged. Prerequisite, major in zoology or biological sciences a minimum of 3.0 cumulative average in the biological sciences, and consent of instructor. Research or integrated reading in zoology. A student may register several times and receive up to 8 semester hours of credit. (Staff.)

ZOOL. 208. SPECIAL PROBLEMS IN ZOOLOGY.

(Credit to be arranged)

Credit hours, and topics to be arranged. Laboratory fee, $8.00. (Staff.)

ZOOL. 399. RESEARCH.

(Credit to be arranged)

Research on thesis project only. Laboratory fee, $8.00. (Staff.)

BUSINESS ADMINISTRATION

B.A. 10. INTRODUCTION TO BUSINESS. (3)

June 22-Aug. 14. M.T.Th. F., 11:00-12:20; Q-132. A survey course treating the internal and functional organization of business enterprise, its organization and control. (Spivey.)

B.A. 20. PRINCIPLES OF ACCOUNTING. (3)

June 22-Aug. 14. M.T.Th.F., 9:30-10:50; Q-122. Prerequisite, sophomore standing. The fundamental principles and problems involved in accounting for proprietorship, corporations and partnerships. (Sweeney.)

B.A. 21. PRINCIPLES OF ACCOUNTING. (3)

June 22-Aug. 14. M.T.Th.F., 8:00-9:20; Q-104. Prerequisite, sophomore standing. The fundamental principles and problems involved in accounting for proprietorships, corporations and partnerships. (Sweeney.)

B.A. 22. ACCOUNTING METHODOLOGY. (3)

June 22-Aug. 14. M.T.Th.F., 9:30-10:50; Q-132. Prerequisite, B.A. 20. Required of majors in accounting. Specialized problems of accounting; cash and accrual basis, single entry and complex adjustments and corrections of prior years' data. (Edelson.)

B.A. 111. INTERMEDIATE ACCOUNTING. (3)

June 22-Aug. 14. M.T.Th.F., 8:00-9:20; Q-122. Prerequisite, B.A. 21. A comprehensive study of the theory and problems of valuation of assets, application of funds, corporation accounts and statements, and the interpretation of accounting statements. (Edelson.)

B.A. 120. ACCOUNTING SYSTEMS. (3)

June 22-Aug. 14. M.T.Th.F., 8:00-9:20; Q-123. How to make a survey of the business, select the methods to be used, design the system or procedure, and prepare the systems report or manual. (Daiker.)

B.A. 124. ADVANCED ACCOUNTING. (3)

June 22-Aug. 14. M.T.Th.F., 11:00-12:20; Q-122. Prerequisite, B.A. 111 or consent of instructor. Advanced accounting theory applied to specialized problems in partnerships, ventures, consignments, installment sales, insurance, statement of affairs, receiver's accounts, realization and liquidation reports, governmental accounting, and applications of mathematics to accounting problems. (Hermanson.)

B.A. 130. BUSINESS STATISTICS I. (3)

June 22-Aug. 14. M.T.Th.F. Prerequisite, junior standing. Laboratory fee, $6.00. Section 1—8:00-9:20; Q-103; Section II—9:30-10:50; Q-103; Section III—11:00-12:20; Q-103. An introductory course. Topics covered include statistical observation, frequency distribution, averages, measures of variability, elementary probability, sampling, distribution, problems of estimation, simple tests of hypotheses, index numbers, time series, graphical and tabular presentation. Selected applications of the techniques are drawn from economics and business. (Nelson, Anderson, Calhoun.)

B.A. 140. BUSINESS FINANCE. (3)

June 22-Aug. 14. M.T.Th.F., 8:00-9:20; Q-111. Deals with principles and practices involved in the organization, financing, and reconstruction of corporations; the various types of securities, and their use in raising funds, apportioning income; risk and control; intercorporate relations; and new developments. (Calhoun.)

B.A. 159. MARKETING PRINCIPLES AND ORGANIZATION. (3)

June 22-Aug. 14. M.T.Th.F., 9:30-10:50; Q-123. An introductory course to give a general understanding and appreciation of the forces operating, institutions employed, and methods followed in marketing agricultural products, natural products. services. and manufactured goods. (Cook.)

B.A. 160. PERSONNEL MANAGEMENT. (3)

June 22-Aug. 14. M.T.Th.F., 12:30-1:50; Q-104. Deals with functional and administrative relationships between management and the labor force. It comprises a survey of the scientific selection of employees, "in-service" training, job analysis, classification and rating, motivation of employees, employee adjustment, wage incentives, employee discipline and techniques of supervision, and elimination of employment hazards. (Nash.)

B.A. 163. INDUSTRIAL RELATIONS. (3)

June 22-Aug. 14. M.T.Th.F., 9:30-10:50; Q-111. A study of the development and methods of organized groups in industry with reference to the settlement of labor disputes. An economic and legal analysis of labor union and employer association activities, arbitration, mediation and conciliation; collective bargaining, trade agreements, strikes, boycotts, lockouts, company unions, employee representation and injunctions. (Spivey.)

B.A. 168. MANAGEMENT AND ORGANIZATION THEORY. (3)

June 22-Aug. 14. M.T.Th.F., 11:00-12:20; Q-111. The development of management and organization theory, nature of the management process and function and its future development. The role of the manager as an organizer and director, the communication process, goals and responsibilities. (Paine.)

B.A. 180. BUSINESS LAW. (3)

June 22-Aug. 14. M.T.Th.F., 8:00-9:20; Q-28. Legal aspects of business relationships, contracts, negotiable instruments, agency, partnerships, corporations, real and personal property and sales. (Dawson.)

B.A. 182. ADVANCED BUSINESS LAW. (3)

June 22-Aug. 14. M.T.Th.F., 9:30-10:50; Q-213. Designed primarily for CPA candidates. Legal aspects of wills, insurance, torts and bankruptcy. (Dawson.)

B.A. 189. BUSINESS AND GOVERNMENT. (3)

June 22-Aug. 14. M.T.Th.F., 11-12:20; Q-28. A study of the role of government in modern economic life. Social control of business as a remedy for the abuses of business enterprise arising from the decline of competition. Criteria of limitations on government regulation of private enterprise. (Smerk.)

B.A. 199. BUSINESS POLICIES. (3)

June 22-Aug. 14. M.T.Th.F. 9:30-10:50; Q-130. Prerequisite, senior standing. A case study course in which the aim is to have the student apply both what he has learned of general management principles and their specialized functional applications of the overall management function in the enterprise. (Staff.)

B.A. 237. MANAGEMENT SIMULATION I. (3)

June 22-Aug. 14. (Evening meeting hours arranged) Lab fee, $6.00. Open only to graduate students. Application of management principles to the solution of complex business problems. Game Theory and computer application where feasible are applied. (Raia.)

B.A. 281. PRIVATE ENTERPRISE AND PUBLIC POLICY. (3)

June 22- Aug. 14. (Evening meeting hours arranged) Open only to graduate students. Examines the executive's social and ethical responsibilities to his employees, customers, and to the general public. The trends in public policy and their future effect upon management are examined. (Smerk.)

B.A. 399. THESIS. (1-6)

Arranged.

OFFICE MANAGEMENT AND TECHNIQUES

B.A. 101. ELECTRONIC DATA PROCESSING. (3)

June 22-July 31. Daily, 8:00; Q-6. Prerequisite, junior standing. Laboratory fee, $10.00. The electronic digital computer and its use as a tool in processing data. (Patrick.)

ECONOMICS

ECON. 4. ECONOMIC DEVELOPMENTS. (3)

June 22-Aug. 14. 11:00-12:20; M.T.Th.F.; Q-28; no prerequisite. Introduction to modern economic institutions with emphasis on development in England, Western Europe and the United States. (Staff.)

ECON. 5. ECONOMIC DEVELOPMENTS. (2)

June 22-Aug. 14. M.W.F., 12:30; Q-111. Modern economic institutions, their origins, development and present status. Emphasis on development in England, Western Europe and the United States. (Staff.)

ECON. 31. PRINCIPLES OF ECONOMICS. (3)

June 22-Aug. 14. M.T.Th.F., 8:00; Q-107. Prerequisite, sophomore standing. A general analysis of the functioning of the economic system, with special emphasis on national income analysis. A considerable portion of the course is devoted to a study of basic concepts and explanatory principles. The remainder deals with the major problems of the economic system. (Staff.)

ECON. 32. PRINCIPLES OF ECONOMICS. (3)

June 22-Aug. 14. M.T.Th.F., 9:30; Q-107. Prerequisite, Econ. 31. A general analysis of the functioning of the economic system, with special emphasis on resource allocation. A considerable portion of the course is devoted to a study of basic concepts and explanatory principles. The remainder deals with the major problems of the economic system. (Staff.)

ECON. 37. FUNDAMENTALS OF ECONOMICS. (3)

June 22-Aug. 14. M.T.Th.F., 8:00; Q-129. Prerequisite, sophomore standing. Not open to students who have credit in Econ. 31 and 32. Not open to B.P.A. students. A survey of the general principles underlying economic activity. This is the basic course in economics for the American Civilization Program for students who are unable to take the more complete course provided in Econ. 31 and 32. (Staff.)

ECON. 102. NATIONAL INCOME ANALYSIS. (3)

June 22-Aug. 14. 11:00-12:20; M.T.Th.F.; Q-123. Prerequisite, Econ. 32. Required for Econ. majors. An analysis of national income accounts and the level of national income and employment. (Staff.)

ECON. 132. ADVANCED ECONOMIC PRINCIPLES. (3)

June 22-Aug. 14. M.T.Th.F., 9:30; Q-104. Prerequisite, Econ. 32. Required for economics majors. This course is an analysis of price and distribution theory with special attention to recent developments in the theory of imperfect competition.

ECON. 140. MONEY AND BANKING. (3)

June 22-Aug. 14. M.T.Th.F., 8:00; Q-108. Prerequisite, Econ. 32 or 37. A study of the organization, functions, and operation of our monetary, credit, and banking system; the relation of commercial banking to the Federal Reserve System; the relation of money and credit to prices; domestic and foreign exchange and the impact of public policy upon banking and credit. (Bennett.)

Econ. 160. Labor Economics. (3)

June 22-Aug. 14. M.T.Th.F., 11:00; Q-107. Prerequisite, Econ. 32 or 37. The historical development and chief characteristics of the American labor movement are first surveyed. Present day problems are then examined in detail; wage theories, unemployment, social security, labor organization, collective bargaining. (Staff.)

Econ. 399. Thesis. (1-6)

Arranged. (Staff.)

GEOGRAPHY

Geog. 10. General Geography. (3)

June 22-Aug. 14. Sec. 1, M.T.Th.F., 8:00; Q-210. Sec. 2, 11:00; Q-228. Introduction to geography as a field of study. A survey of the content, philosophy, techniques, and application of geography and its significance for the understanding of world problems. (Mika, Schmieder.)

Geog. 40. Principles of Meteorology. (3)

June 22-Aug. 14. M.T.Th.F., 9:30; Q-210. Proporties and conditions of the atmosphere. The atmopsheric circulation and conditions responsible for various types of weather and their geographic distribution patterns. (Chaves.)

Geog. 100. Regional Geography of Eastern Anglo-America. (3)

June 22-Aug. 14. M.T.Th.F., 11:00; Q-210. A study of the cultural and economic geography and the geographic regions of Eastern United States and Canada, including an analysis of the significance of the physical basis. (Mika.)

Geog. 105. Geography of Maryland and Adjacent Areas. (3)

June 22-Aug. 14. M.T.Th.F., 8:00; Q-228. An analysis of the physical environment, natural resources, and population in relation to agriculture, industry, and trade, in Maryland and adjacent areas. (Schmieder.)

Geog. 111. Economic and Cultural Geography of South America. (3)

June 22-Aug. 14. M.T.Th.F. 12:30; Q-210. Natural environment and resources, economic development and cultural diversity of the South American republics, with emphasis upon problems and prospects. (Chaves.)

GOVERNMENT AND POLITICS

G. & P. 1. American Government. (3)

June 22-Aug. 14. This course is designed as the basic course in government for the American Civilization Program, and it or its equivalent is a prerequisite to all other courses in the department. It is a comprehensive study of governments in the United States—national, state, and local.

Section 1—M.T.Th.F. 8:00; Q-110. (Staff.)
Section 2—M.T.Th.F. 9:30; Q-211. (Staff.)
Section 3—M.T.Th.F. 11:00; Q-108. (Staff.)

G. & P. 60. STATE AND LOCAL GOVERNMENT. (3)
June 22-Aug. 14. M.T.Th.F., 9:30; Q-110. Prerequisite, G. & P. 1. Study of the functioning and problems of state and local government in the United States with illustrations from Maryland jurisdictions. (Conway.)

G. & P. 101. INTERNATIONAL POLITICAL RELATIONS. (3)
June 22-Aug. 14. M.T.Th.F., 8:00; Q-211. Prerequisite, G. & P. 1. A study of the major factors underlying international relations, the influence of geography, climate, nationalism, and imperialism, and the development of foreign policies of the major powers. (Jacobs.)

G. & P. 110. PRINCIPLES OF PUBLIC ADMINISTRATION. (3)
June 22-Aug. 14. M.T.Th.F., 11:00; Q-213. Prerequisite, G. & P. 1. A study of public administration in the United States, giving special attention to the principles of organization and management and to fiscal, personnel, planning, and public relations practices. (Dillon.)

G. P. 142. RECENT POLITICAL THEORY. (3)
June 22-Aug. 14. M.T.Th.F., 11:00; Q-110. Prerequisite, G. & P. 1. A study of 19th and 20th century political thought with special emphasis on recent theories of socialism, communism, and fascism. (Byrd.)

G. & P. 154. PROBLEMS OF WORLD POLITICS. (3)
June 22-Aug. 14. M.T.Th.F., 9:30; Q-108. Prerequisite, G. & P. 1. A study of governmental problems of international scope, such as causes of war, problems of neutrality, and propaganda. Students are required to report on readings from current literature. (Steinmeyer.)

G. & P. 174. POLITICAL PARTIES. (3)
June 22-Aug. 14. M.T.Th.F., 8:00; Q-213. Prerequisite, G. & P. 1. A descriptive and analytical examination of American political parties, nominations, elections, and political leadership. (Conway.)

G. & P. 197. COMPARATIVE GOVERNMENTAL INSTITUTIONS. (3)
June 22-Aug. 14. M.T.Th.F., 11:00; Q-211. Prerequisite, G. & P. 1. A study of major political institutions such as legislatures, executives, courts, administrative systems, and political parties, in selected foreign governments. (Jacobs.)

G. & P. 225. MAN AND THE STATE. (3)
Arranged. Q-369. (Byrd.)

G. & P. 261. PROBLEMS OF GOVERNMENT AND POLITICS (NATIONAL). (3)
Arranged. Q-369. (Hathorn.)

G. & P. 261. PROBLEMS OF GOVERNMENT AND POLITICS (INTERNATIONAL). (3)
Arranged. Q-369. (Steinmeyer.)

G. & P. 399. THESIS. (1-6)
Arranged. (Staff.)

JOURNALISM

JOURN. 173. SCHOLASTIC JOURNALISM. (3)
June 22-July 31. Daily, 8:00; G-304. Introduction to theory and practice in production of high school and junior high publications. Outline for teaching high school course in journalism. (Crowell.)

EDUCATION

EARLY CHILDHOOD-ELEMENTARY EDUCATION *

ECEEd 52. INTRODUCTION TO CHILDREN'S LITERATURE. A, B. (3)
June 22-July 31. Daily, 11:00; A-16. Prerequisite: English 1 and 2. (Staff.)

ECEEd 105. SCIENCE IN THE ELEMENTARY SCHOOL. A, B. (3)
Section 1—June 22-July 31. Daily, 8:00; T-119. (Blough.)
Section 2—June22-July 31. Daily, 9:30; A-14. (F. Brown.)
Laboratory fee, $2.00.

ECEEd 115. ACTIVITIES AND MATERIALS IN EARLY CHILDHOOD EDUCATION. (3)
June 22-July 31. Daily, 8:00; AA-9. Prerequisite: ECEEd. 50, 51, or 110. Laboratory fee, $5.00. (Coonce.)

ECEEd. 116. MUSIC IN EARLY CHILDHOOD EDUCATION. (3)
June 22-July 31. Daily, 9:30; AA-9. Prerequisite: Music 16 or equivalent. (L. Brown.)

ECEEd 121. LANGUAGE ARTS IN THE ELEMENTARY SCHOOL. A, B. (3)
June 22-Aug. 14. M.T.Th.F., 9:30; A-17. (Seidman.)

ECEEd 122. SOCIAL STUDIES IN THE ELEMENTARY SCHOOL. A, B. (3)
Section 1—June 22-Aug. 14. M.T.Th.F., 8:00; A-18. (Duffey.)
Section 2—June 22-Aug. 14. M.T.Th.F., 9:30; A-18. (Weaver.)

ECEEd 123. THE CHILD AND THE CURRICULUM. A, B. (3)
June 22-July 31. Daily, 9:30; A-104. (Bennett.)

ECEEd 124. MATHEMATICS IN THE ELEMENTARY SCHOOL. A, B. (3)
Section 1—June 22-Aug. 14. M.T.Th.F., 8:00; A-48. (Schindler.)
Section 2—June 22-Aug 14. M.T.Th.F., 9:30; A-48. (Schindler.)

ECEEd 125. ART IN THE ELEMENTARY SCHOOL. (3)
Section 1—June 22-Aug. 14. M.T.Th.F., 9:30; A-259. (Longley.)
Section 2—June 22-Aug. 14. M.T.Th.F., 11:00; A-104. (Longley.)
Enrollment limited to 25 per section.

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* Throughout this section, A. refers to Early Childhood level, B. refers to Elementary level, C. refers to Secondary level.

ECEEd 152. LITERATURE FOR CHILDREN AND YOUNG PEOPLE, ADVANCED. (3)

June 22-July 31. Daily, 8:00; A-259. Prerequisite, ECEEd. 52 or consent of instructor. (Bennett.)

ECEEd 153. THE TEACHING OF READING. A, B, C. (3)

Section 1—(A. B) June 22-July 31. Daily, 8:00; F-103. (Hall.)
Section 2—(A. B) June 22-Aug. 14. M.T.Th.F., 11:00; A-259. (Seidman.)
Section 3—(C) June 22-Aug. 14. M.T.Th.F., 8:00; F-104. (Lonsdale.)

ECEEd 200. SEMINAR IN ELEMENTARY EDUCATION. (2)

June 22-Aug. 14. M.W.F., 9:30; F-103. Prerequisite, 12 s. h. graduate work. (Lonsdale.)

ECEEd 205. PROBLEMS OF TEACHING SCIENCE IN ELEMENTARY SCHOOLS. (2)

June 22-July 31. M.T.Th.F., 9:30; T-119. (Blough.)

ECEEd 221. PROBLEMS OF TEACHING LANGUAGE ARTS IN ELEMENTARY SCHOOLS. (2)

June 22-Aug. 14. M.W.F., 8:00; O-101. (Collins.)

ECEEd 222. PROBLEMS OF TEACHING SOCIAL STUDIES IN ELEMENTARY SCHOOLS. (2)

June 22-Aug. 14. M.W.F., 11:00; F-103. (Weaver.)

ECEEd 224. PROBLEMS OF TEACHING MATHEMATICS IN ELEMENTARY SCHOOLS. (2)

June 22-July 31. M.T.Th.F., 11:00; F-104. (F. Brown.)

GENERAL EDUCATION

Ed. 102. HISTORY OF EDUCATION IN THE UNITED STATES. (3)

June 22-July 31. Daily, 9:30; F-101. (deBeruff.)

Ed. 107. PHILOSOPHY OF EDUCATION. (3)

June 22-Aug. 14. M.T.Th.F. 11:00; F-101. (Agre.)

Ed. 110. HUMAN DEVELOPMENT AND LEARNING. (6)*

Section 1—June 22-Aug. 14. 8:00-10:50, M.T.Th.F.; J-149. (Lawson.)
Section 2—June 22-Aug. 14. 9:30-12:20, M.T.Th.F.; J-135. (Peck.)

Ed. 147. AUDIO-VISUAL EDUCATION. (3)

Section 1—June 22-July 31. 8.00 Daily; P-300. (Maley.)
Section 2—June 22-July 31. 9:30 Daily; P-300. (Schramm.)
Section 3—June 22-Aug. 14. 11:00 M.T.Th.F.; P-300. (Schramm.)

Ed. 150. EDUCATIONAL MEASUREMENT. (3)

Section 1—June 22-July 31. Daily, 11:00; G-205. Limited to 50. (Giblette.)
Section 2—June 22-Aug. 14. M.T.Th.F., 8:00; G-109B. Limited to 50. (Klevan.)

*Students in Ed. 110 must reserve Wednesday mornings for observation-participation in a public school off-Campus.

ED. 151. STATISTICAL METHODS IN EDUCATION. (3)
Section 1—June 22-Aug. 14. M.T.Th.F., 8:00; G-109A. Limited to 50. (Dayton.)
Section 2—June 22-Aug. 14. M.T.Th.F., 9:30; G-205. Limited to 50. (Stunkard.)

ED. 154. INTRODUCTION TO CORRECTIVE AND REMEDIAL READING. (3)
June 22-Aug. 14. M.T.Th.F., 8:00. Ed. Annex. (Staff.)

ED. 155. LABORATORY PRACTICES IN READING. A, B. C. (3)
June 22-Aug. 14. Daily, Arranged. Ed. Annex. Prerequisite: Ed. 154 or equivalent. (Fanning.)

ED. 161. INTRODUCTION TO COUNSELING AND PUPIL SERVICES. (3)
June 22-Aug. 14. M.T.Th.F., 8:00; G-205. (Staff.)

ED. 162. MENTAL HYGIENE IN THE CLASSROOM. (3)
June 22-Aug. 14. M.T.Th.F., 9:30; A-8. (Greenberg.)

ED. 188. SPECIAL PROBLEMS IN EDUCATION. (1-3)
Prerequisite, consent of instructor. Available only to mature students who have definite plans for individual study of approved problems. Course cards must have the title of the problem and the name of the faculty member who has approved it. Arranged. (Staff.)

ED. 189. WORKSHOPS, CLINICS, AND INSTITUTES.

ED. 189-1. EDUCATION IN FAMILY FINANCE. (4)
June 22-July 17. 8:30-3:30; Q-20 and 27. See page 18. (C. Anderson.)

ED. 189-8. WORKSHOP IN INSTRUCTIONAL MATERIALS. (3)
June 22-July 10. 11:00-12:20 and 1:30-2:50. L-100. See page 21. (Hatfield.)

ED. 189-9. WORKSHOP ON ECONOMIC EDUCATION. (3)
July 20-Aug. 7. 9:00-3:00. See page 18; Q-129.

ED. 189-26. HUMAN RELATIONS IN EDUCATIONAL ADMINISTRATION (6)
June 22-July 31. Daily, 9:00-3:00; J-18. Prerequisite, a master's degree. Enrollment limited. Preference in enrollment will be given to teams designated by Maryland school systems. See page 21. (Newell, Bowie.)

ED. 189-29. WORKSHOP IN THE EDUCATION OF CHILDREN WITH LEARNING DISABILITIES. (4)
June 22-July 17. Daily, 9-3. To be held off-campus. See page 23. (Fouracre, Hebeler.)

ED. 189-33. CHILD STUDY LEADERS. (2)
June 22-July 3. Daily, 8:00-3:00; J-36. See page 20. (Morgan, Prescott.)

ED. 189-35. APPLICATION OF HUMAN DEVELOPMENT PRINCIPLES IN CLASSROOMS. (2)
July 6-July 17. Daily, 8:00-3:00; J-36. See page 20. (Prescott.)

Ed. 189-36. Human Development and Religious Education. (2)
July 20-July 31. Daily, 8:00-3:00, J-10. See page 20. (Morgan, Prescott.)

Ed. 189-37. Action Research in Human Development Education. (2)
Aug. 3-Aug. 14. Daily, 8:00-3:00, J-10. See page 20. (Morgan.)

Ed. 189-41. N.D.E.A. Counseling and Guidance Training Institute. (7)
June 29-Aug. 7. Daily, 8-5:00. Terrapin Room. See page 15 for description. (Bott.)

Ed. 189-47. Workshop for Teachers of Secondary School English. (3)
June 22-July 10. 10:00-3:30; G-109A and G-109B. See page 22. (Bryan.)

Typewriting Demonstration Laroratory. (0)
June 22-July 31. 8:30-10:15. (O'Neill.)

Ed. 206. Seminar in Comparative Education. (2)
June 22-July 31. M.T.Th.F.; 8:00; A-8. (Wiggin.)

Ed. 210. The Organization and Administration of Public Education. (3)
Section 1—June 22-July 31. Daily, 8:00; A-16. (Blaha.)
Section 2—June 22-July 31. Daily, 11:00; A-14. (Blaha.)

Ed. 211. The Organization and Administration of Secondary Schools. (3)
June 22-July 31. Daily, 11:00; A-17. (Staff.)

Ed. 214. School Plant Planning. (2)
June 22-July 31. M.T.Th.F., 9:30; A-103. (van Zwoll.)

Ed. 216. Public School Supervision. (3)
June 22-Aug. 14. M.T.Th.F., 8:00; A-103. (J. P. Anderson.)

Ed. 217. Administration and Supervision in Elementary Schools. (3)
June 22-July 31. Daily 9:30; A-320. (Johnson.)

Ed. 219. Seminar in Educational Administration and Supervision. (2)
June 22-July 31. M.T.Th.F., 11:00; A-323. Prerequisite, at least four hours in educational administration and supervision or consent of instructor. A student may register for two hours and take the seminar a second time for an additional two hours. (Johnson.)

Ed. 227. Public School Personnel Administration. (3)
June 22-July 31. Daily, 8:00; A-323. (van Zwoll.)

Ed. 234. The School Curriculum. (2)
June 22-July 31. M.T.Th.F., 9:30; F-104. (Hovet.)

ED. 235. PRINCIPLES OF CURRICULUM DEVELOPMENT. (3)
June 22-July 31. Daily, 11:00; A-18. (Harrison.)

ED. 241. PROBLEMS IN THE TEACHING OF READING. (3)
June 22-Aug. 14. M.T.Th.F., 9:30; O-101. Prerequisite, Ed. 153 or equivalent. (Collins.)

ED. 245. INTRODUCTION TO RESEARCH. (2)
Section 1—June 22-July 31. M.T.Th.F., 8:00. Limited to 25; FF-16. (Nelson.)
Section 2—June 22-July 31. M.T.Th.F., 9:30. Limited to 25; FF-16. (Raths.)
Section 3—June 22-July 31. M.T.Th.F., 11:00. Limited to 25; A-49. (Hovet.)

ED. 250. CASES IN PUPIL APPRAISAL. (3)
June 22-Aug. 14. M.T.Th.F., 11:00; A-50. (Chenault.)

ED. 251. INTERMEDIATE STATISTICS IN EDUCATION. (3)
June 22-August 14, M.T.Th.F., 9:30; T-5.
Prerequisite, Ed. 151 or equivalent. (Dayton.)

ED. 255. ADVANCED LABORATORY EXPERIENCES IN READING INSTRUCTION. (3)
June 22-August 14. Daily. Arranged. Ed. Annex. Prerequisites, 21 credits applicable to master's program in Corrective-Remedial Reading, including Ed. 154, Ed. 150, and Ed. 141 or ECEE 221; and a written application before June 1. (Fanning.)

ED. 256. ADVANCED LABORATORY EXPERIENCES IN READING INSTRUCTION. (3)
June 22-August 14. Daily. Arranged. Ed. Annex. Prerequisite, same as those for Ed 255. (Fanning.)

ED. 259. COUNSELING IN ELEMENTARY SCHOOLS. (3)
June 22-August 14. M.T.Th.F., 8:00; O-240. (Greenberg.)

ED. 260. SCHOOL COUNSELING: THEORETICAL FOUNDATIONS AND PRACTICE. (3)
June 22-July 31, Daily 8:00; O-120.
Prerequisites, Ed. 161, Ed. 250, and Ed. 253. (Marx.)

ED. 261. PRACTICUM IN COUNSELING. (2)
June 22-August 14, M.W.F., 9:30, O-236.
Prerequisite, Ed. 260 and permission of instructor. (Chenault.)

ED. 280. RESEARCH METHODS AND MATERIALS. (2)
June 22-August 14. Arranged.
Primarily for advanced students and doctoral candidates. Limited to 15. (Stunkard.)

ED. 281. SOURCE MATERIALS IN EDUCATION. (2)
June 22-July 31. M.T.Th.F., 8:00; O-236. (Luetkemeyer.)

Ed. 288. Special Problems in Education. (1-6)
Arranged. Master of Education or doctoral candidates who desire to pursue special research problems under the direction of their advisers may register for credit under this number. Course cards must have the title of the problem and the name of the faculty member under whom the work will be done.
(Staff.)

Ed. 290. Doctoral Seminar. (1)
June 22-August 14. Arranged. Prerequisite, passing the preliminary examination for a doctor's degree in Education, or recommendation of a doctoral adviser. A doctoral candidate may participate in the Seminar during as many University sessions as he desires, but may earn no more than three semester hours of credit in the Seminar. An Ed.D. candidate may earn in total no more than nine semester hours, and a Ph.D. candidate, no more than eighteen semester hours, in the Seminar and in Ed. 399. Limited to 15. (Stunkard.)

Ed. 302. Curriculum in Higher Education. (3)
July 31-August 14. M.T.Th.F., 9:30; A-10. (Kelsey.)

Ed. 305. College Teaching. (3)
July 31-August 14. M.T.Th.F., 8:00; A-10. (Kelsey.)

Ed. 399. Research-Thesis. (1-6)
Arranged. (Staff.)

SECONDARY EDUCATION

GENERAL AND ACADEMIC EDUCATION

Sec. Ed. 130. The Junior High School. (3)
June 22-July 31. Daily, 8:00; A-104. (Crosby.)

Sec. Ed. 133. Methods of Teaching Social Studies in Secondary Schools. (3)
June 22-August 14. M.T.Th.F., 9:30; FF-7. (Campbell.)

Sec. Ed. 137. Methods of Teaching Mathematics in Secondary Schools. (3)
June 22-August 14. M.T.Th.F., 9:30-10:50. (Cole.)

Sec. Ed. 138. Methods of Teaching Science in Secondary Schools. (3)
June 22-August 14. M.T.Th.F., 9:30; T-10. (Pancella.)

Sec. Ed. 141. Methods of Teaching English in Secondary Schools. (3)
June 22-August 14. M.T.Th.F., 8:00; R-109. (Staff.)

Sec. Ed. 145. Principles and Methods of Secondary Education. (3)
June 22-August 14. M.T.Th.F., 8:00; A-228. (Van Ness.)

Ed. 189-47, page 22, Workshop for Teachers of Secondary English. (3)

SEC. ED. 160. EDUCATIONAL SOCIOLOGY. (3)
June 22-August 14. M.T.Th.F., 11:00; O-120. (Pickett.)

SEC. ED. 239. SEMINAR IN SECONDARY EDUCATION. (2)
August 3-14. 9:30-12:30; A-170. (Grambs.)

BUSINESS EDUCATION

B. ED. 102. METHODS AND MATERIALS IN TEACHING BOOKKEEPING AND RELATED SUBJECTS. (2)
June 22-July 31. M.T.Th.F., 9:30-10:50; Q-6. (Fries.)

B. ED. 205. SEMINAR IN BUSINESS EDUCATION. (2)
June 22-July 31. M.T.Th.F., 11:00-12:20; Q-6. (Patrick.)

B. ED. 256. CURRICULUM DEVELOPMENT IN BUSINESS EDUCATION. (3)
June 22-July 31. Daily, 12:30-1:50; Q-6. (Fries.)

HOME ECONOMICS EDUCATION

H. EC. ED. 102. PROBLEMS IN TEACHING HOME ECONOMICS. (3)
June 22-July 17. 8:00-10:50. A-50. (Spencer.)

H. EC. 202. TRENDS IN THE TEACHING AND SUPERVISION OF HOME ECONOMICS. (3)
July 20-August 14. 8:00-10:50. A-50. (Spencer.)

MUSIC EDUCATION

MUS. ED. 128. MUSIC FOR THE ELEMENTARY CLASSROOM TEACHER. (3)
June 22-July 31. Daily, 8:00-9:20; B-1. Prerequisite, Music 16 or equivalent, or consent of instructor. A study of group activities and materials through which the child experiences music. (Fanos.)

MUS. ED. 132. MUSIC IN SECONDARY SCHOOLS. (3)
June 22-July 31. Daily, 8:00-9:20; B-7. A study of the vocal and instrumental programs in the secondary school. (Eisenstadt.)

MUS. ED. 139. MUSIC FOR THE ELEMENTARY SCHOOL SPECIALIST. (3)
June 22-July 31. Daily, 11:00-12:20; B-7. A survey of instructional materials and objectives. (Eisenstadt.)

MUS. ED. 155. ORGANIZATION AND TECHNIQUE OF INSTRUMENTAL CLASS INSTRUCTION. (3)
June 22-July 10. Daily, 2:00-5:00 for three weeks; Arm. 300. Offered as part of High School Band Workshop. A survey of materials and methods for class instruction. Supplementary fee, $5.00. (Sawhill.)

MUS. ED. 171. STRING TEACHING IN THE PUBLIC SCHOOLS. (2)
June 22-July 31. M.T.Th.F., 9:30-10:50; HH-108. A study of the organization and development of public school string programs. Study of teaching techniques and appropriate music. (Berman.)

MUS. ED. 204. CURRENT TRENDS IN MUSIC EDUCATION. (3)
June 22-July 31. Daily, 9:30-10:50; B-9. A survey of current philosophies and practices in the public schools. (Grentzer.)

MUS. ED. 250. HISTORY AND AESTHETICS OF MUSIC EDUCATION. (3)
June 22-July 31. Daily, 11:00-12:20; B.9. Prerequisite, consent of instructor. The development of pedagogical practices in music education, their aesthetic implications, and their educational values. (Grentzer.)

HUMAN DEVELOPMENT EDUCATION

(In addition to the courses listed below, see Ed. 110, Ed. 189-33,-35,-36,-37)

H. D. ED. 101. PRINCIPLES OF HUMAN DEVELOPMENT II. (3)
June 22-July 31. Daily, 9:30; J-143. (Kyle.)

H. D. ED. 110. CHILD DEVELOPMENT III. (3)
June 22-July 31. Daily, 8:00; AA-8. (Broome.)

H. D. ED. 112, 114. SCIENTIFIC CONCEPTS IN HUMAN DEVELOPMENT I, II. (3) (3)
June 22-July 31. Daily, J-154, J-150. See page 19. (Mershon, Matteson.)

H. D. ED. 113, 115. LABORATORY IN BEHAVIOR ANALYSIS I, II. (3) (3)
June 22-July 31. Daily, J-14, J-153, J-128. See page 19. (Mershon, Matteson.)

H. D. ED. 145. GUIDANCE OF YOUNG CHILDREN. (3)
June 22-July 31. Daily, 9:30; AA-8. (Broome.)

H. D. ED. 200. INTRODUCTION TO HUMAN DEVELOPMENT AND CHILD STUDY. (3)
June 22-July 31.
Section 1—8:00, Daily; J-207. (Kurtz.)
Section 2—9:30, Daily; J-207. (Perkins.)

H. D. ED. 201. BIOLOGICAL BASES OF BEHAVIOR. (3)
June 22—July 31. Daily, 9:30; J-124. (Kurtz.)

H. D. ED. 202. SOCIAL BASES OF BEHAVIOR. (3)
June 22-July 31. Daily, 8:00; J-9. (Brandt.)

H. D. ED. 203. INTEGRATIVE BASES OF BEHAVIOR. (3)
June 22-July 31. Daily, 9:30; J-341. (Staff.)

H. D. ED. 210. AFFECTIONAL RELATIONSHIPS AND PROCESSES IN HUMAN DEVELOPMENT. (3)
June 22-July 31. Daily, 8:00; J-126. (Kyle.)

H. D. ED. 212, 214. ADVANCED SCIENTIFIC CONCEPTS IN HUMAN DEVELOPMENT, I, II. (3) (3)
June 22-July 31. Daily, J-347, J-355, J-320. See page 19 (Mershon, Matteson.)

H. D. ED. 213, 215. ADVANCED LARORATORY IN BEHAVIOR ANALYSIS, I, II. (3) (3)
June 11-July 31. Daily; J-361, J-369. See page 19. (Mershon, Matteson.)

H. D. ED. 221. LEARNING THEORY AND THE EDUCATIVE PROCESS. (3)
June 22-July 31. Daily, 8:00; J-128. (Perkins.)

INDUSTRIAL EDUCATION

I. ED. 34. GRAPHIC ARTS I (3)
June 22-July 31. Daily, 11:00; P-201. Laboratory fee, $7.50. (Tierney.)

I. ED. 44. GRAPHIC ARTS II. (3)
June 22-July 31. Daily, 11:00; P-201. Laboratory fee, $7.50. (Tierney.)

I. ED. 69. MACHINE SHOP I (3)
June 22-July 31. Daily, 9:30; P-126. Laboratory fee, $7.50. (Herrick.)

I. ED. 84. ORGANIZED AND SUPERVISED WORK EXPERIENCE. (3)
June 22-August 14.
Arranged for students enrolled in the curriculum Education for Industry.
(Guy, Herrick.)

I. ED. 89. MACHINE SHOP II. (3)
June 22-July 31. Daily, 9:30; P-126. Laboratory fee, $5.00. (Herrick.)

I. ED. 115. RESEARCH AND EXPERIMENTATION IN INDUSTRIAL ARTS. (3)
June 22-July 31. Daily, 11:00; P-128. (Maley.)

I. ED. 121. INDUSTRIAL ARTS IN SPECIAL EDUCATION. (3)
June 22-July 31. Daily, 9:30-12:00; P-214. Laboratory fee, $5.00.
(Luetkemeyer.)

I. ED. 124. ORGANIZED AND SUPERVISED WORK EXPERIENCE (3)
June 22-August 14. (Merrill.)
Arranged for students enrolled in the curriculum Education for Industry.

I. ED. 125. INDUSTRIAL TRAINING IN INDUSTRY. (3)
June 22-August 14. M.T.Th.F., 8:00; P-221. (Merrill.)

I. ED. 150. TRAINING AIDS DEVELOPMENT. (3)
June 22-July 31. Daily, 8:00; P-300. (Maley.)

I. ED. 164. SHOP ORGANIZATION AND MANAGEMENT. (2)
June 22-July 31. M.T.Th.F., 9:30; P-221. (Snyder.)

I. ED. 168. TRADE OR OCCUPATIONAL ANALYSIS. (2)
June 22-July 31, M.T.Th.F., 11:00, P-220. (Snyder.)

I. ED. 175. RECENT TECHNOLOGICAL DEVELOPMENTS IN PRODUCTS AND PROCESSES. (3)
June 22-July 31. Daily, 9:30; P-306. (Crosby.)

I. Ed. 207. Philosophy of Industrial Arts Education. (3)
June 22-August 14. M.T.Th.F. (Harrison.)

I. Ed. 216. Supervision of Industrial Arts. (2)
June 22-July 31. M.T.Th.F., 8:00; P-220. (Tierney.)

LIBRARY SCIENCE EDUCATION

L. S. Ed. 120. Introduction to Librarianship. (3)
June 22-July 10. 11:00-12:20 and 1:30-2:50 Introduction; A-8-N. (Staff.)

L. S. Ed. 124. Book Selection and Evaluation for Children and Youth. (3)
June 22-July 17. 8:00-9:20 and 9:30-10:50; L-100. (D. Brown.)

L. S. Ed. 128. School Library Administration and Service. (3)
July 20-August 14. 8:00-9:20 and 9:30-10:50; L-100. (D. Brown.)

L. S. Ed. 132. Library Materials for Youth. (3)
July 13-July 31. 11:00-12:20 and 1:30-2:50; L-100. Library materials for junior high and senior high school students, including book and non-book materials. (A. Smith.)

Ed. 189-8, page 21, Workshop in Instructional Materials. (3)

SPECIAL EDUCATION

Sp. Ed. 170. Introduction to Special Education. (3)
June 22-July 31. Daily, 8:00-9:20; AR-23. (Simms.)

Sp. Ed. 171-A. Characteristics of Exceptional Children. (3)
June 22-July 31. Daily, 9:30-10:50; AR-23.
A. Mentally Retarded. Prerequisite, Sp. Ed. 170. (Renz.)

Sp. Ed. 200. Exceptional Children and Youth. (3)
June 22-July 31. Daily, 8:00-9:20; AR-20. Prerequisite, consent of instructor.

Sp. Ed. 210. Administration and Supervision of Special Education Programs. (2)
June 22-July 3. Daily, 8:00-12:00; A-10. Prerequisite, consent of instructor. (Wirtz.)

Sp. Ed. 215. Evaluation and Measurement of Exceptional Children and Youth. (3)
June 22-July 31. Daily, 9:30-10:50. Prerequisite, Ed. 150, 151, Sp. Ed. 200; AR-21. (Simms, Hebeler.)

Sp. Ed. 220. Educational Diagnosis and Planning for Exceptional Children and Youth. (3)
July 6-Aug. 14. Daily, 11:00-12:20. Prerequisite, Sp. Ed. 215; AR-20. (Hebeler.)

SP. ED. 278. SEMINAR IN SPECIAL EDUCATION. (2)
June 22-July 31, M.T.Th.F., 8:00-9:20. Prerequisite, 9 hours in Sp. Ed. or consent of instructor; AR-21. (Hebeler.)

ENGINEERING

C. E. 110. SURVEYING I. (3)
June 8-June 20. Daily, 8:00-3:30; J-103. J-104. Prerequisite: junior standing or consent of department head. Open only to students who have been enrolled in the College of Engineering. (Garber.)

E. E. 1. BASIC ELECTRICAL ENGINEERING. (4)
June 22-August 14, 1964. M.T.Th.F., 8:00-9:20; J-104. S. 8:00-10:50, S-107. Prerequisites, Math. 21, Phys. 21, or concurrent registration. Required of sophomores in electrical engineering. Laboratory fee, $5.00. Basic concepts of electrical circuits and methods of analysis. (Rumbaugh.)

E. E. 101. ENGINEERING ELECTRONICS. (4)
June 22-August 14, 1964. M.T.Th.F., 8:00-9:20, J-131. S. 8:00-10:50, J-208. Prerequisite, E. E. 100. Required of juniors in electrical engineering. Laboratory fee, $5.00. Theory and application of transistors and electron tubes; electronic circuits and methods of circuit analysis. (Jones.)

E. E. 104. LONG LINE THEORY. (3)
June 22-August 14, 1964. M.T.Th.F., 9:30-10:50; J-9. Prerequisite, E. E. 107. Required of juniors in electrical engineering. Engineering application of Maxwell's equations; waves in space; wave guides; transmission lines; matching. (Hahn.)

E. S. 10. MECHANICS. (4)
June 22-August 14, 1964. Section 1—M.T.W.Th.F., 8:00-9:20, J-304. Section 2—M.T.W.Th.F., 11:00-12:20, J-304. Prerequisites, E. S. 1; Math. 19 (or concurrent). Numerical, graphical and vectorial computation applied to elementary problems in mechanics. (Elkins.)

E. S. 20. MECHANICS OF MATERIALS. (3)
June 22-August 14, 1964. M.T.Th.F., 11:00-12:20; J-371. Prerequisite, Math. 20, Phys. 20 and E. S. 10. Distortion of engineering materials with application to beams, columns, shafts, tanks, trusses, and connections. (Jackson.)

E. S. 21. DYNAMICS. (3)
June 22-August 14, 1964. M.T.Th.F., 12:30-1:50; J-371. Prerequisites, Math. 20. Phys. 20 (or concurrent registration) and E. S. 10. Dynamics of particles and rigid bodies with applications to engineering problems. (Yang.)

M. E. 1. THERMODYNAMICS I. (3)
June 22-August 14, 1964. M.T.W.Th.F., 8:00-9:20; J-201. Prerequisites, Phys. 20; Math. 21 concurrently. Required of sophomores in mechanical and aeronautical engineering. (M. E. 1 is an acceptable substitute for M. E. 100 in other engineering curricula.) (Eyler.)

HOME ECONOMICS

FAMILY LIFE AND MANAGEMENT

H. M. 50. DECISION MAKING IN FAMILY LIVING. (3)

July 20-August 14. 9:30-11:45. Decision making in relation to family values, philosophies, goals, and resources. (Staff.)

H. M. 161. RESIDENT EXPERIENCE IN HOME MANAGEMENT. (3)

First group, June 22-July 18; second group, July 20-August 15. Laboratory fee, $10.00. A charge of $40.00 for food and supplies is assessed each student. Students not living in dormitories are billed at the rate of $5.00 a week for a room in the Home Management House. (Staff.)

F. L. 135. DIRECTED EXPERIENCE WITH CHILDREN AND FAMILIES. (3)

July 20-August 7. 9:00-12:00. Laboratory fee, $3.00. Prerequisite, Psych. 1 and consent of instructor. Observation and study of selected home situations placing emphasis on contemporary family living. (Morgan.)

FOOD AND NUTRITION

F. & N. 5. FOOD AND NUTRITION OF INDIVIDUALS AND FAMILIES. (3)

July 20-Aug. 14. 9:00-12:00. Consent of instructor. Laboratory fee, $3.00. A study of the food and nutrition of contemporary peoples. The economic, social, esthetic, and nutritional implications of food. (Lanz.)

FOOD 150. FOOD ECONOMICS AND MEAL MANAGEMENT. (3)

June 22-July 17. 9:00-12:00. Consent of department. Lecture and laboratory. Laboratory fee, $10.00. Management of family meals through study of the distribution and marketing of food, and the management of time, energy, money, and other resources. (Lanz.)

GENERAL HOME ECONOMICS

H. E. 190. SPECIAL PROBLEMS IN HOME ECONOMICS. (1-3)

Arranged. Laboratory fee, $3.00 a semester hour. Problems in the following areas of home economics: (a) Applied Art; (b) Clothing; (c) General Home Economics; (d) Family Life; (e) Food and Institutional Food; (f) Management; (g) Nutrition; (h) Textiles. (Staff.)

H. E. 290. SPECIAL TOPICS. (1-6)

Topics in same fields as H. E. 190 but for graduate credit only. (Staff.)

H. E. 201. METHODS OF RESEARCH IN HOME ECONOMICS. (3)

June 22-July 17. 9:30-11:45. Consent of instructor. Application of scientific methods to problems in the field of home economics. (Loftis.)

H. E. 399; F. & N. 399; T. & C. 399. THESIS RESEARCH. (1-6)

Credit according to work accomplished. (Staff.)

H. E. 190 C OR 290 C. SPECIAL PROBLEMS OR TOPICS—COLLOQUIUM IN HOME ECONOMICS. (1)

July 20-24. 9:00-12:00. Overview of trends and developments in the several areas. (Visiting Lecturers.)

H. E. 290 c. SPECIAL TOPICS. (1)
July 27-July 31. 9:00-12:00. Special emphasis given to Home Economics college teachers directing research activities. (Special Coordinator.)

HOUSING AND APPLIED DESIGN

A. D. 1. DESIGN. (3)
June 22-July 31. 8:00-9:15, daily. Fee, $3.00. Art expression through various media. (Roper.)

A. D. 142. ADVANCED INTERIOR DESIGN. (2)
August 3-August 14. 9:00-12:15. Prerequisites, A. D. 1, 2, and 41. Fee, $3.00. Designing of rooms rendered in perspective; coordination with fabrics, floor, and wall finishes. (Staff.)

TEXTILES AND CLOTHING

TEX. 50. CONSUMER TEXTILES. (3)
July 27-Aug. 14. 9:00-12:15. Prerequisite, T. & C. 5 or consent of instructor. Laboratory fee, $3.00. Problems of consumers in textile selection, purchase, and care. (Mitchell.)

T. & C. 126. FUNDAMENTALS OF FASHION. (3)
July 27-August 14. 9:00-12:00. Prerequisite, Clo. 120. Laboratory fee, $3.00. Fashion history; interpretation and evaluation of current fashions; promotion. (Visiting Lecturer.)

T. & C. 128. FUNDAMENTALS OF HOME FURNISHINGS. (3)
June 29-July 17. 9:00-12:15. Prerequisites, T. & C. 5, Clo. 10, and/or consent of instructor. Laboratory fee, $3.00. Selection of fabrics for home and institutional furnishings; custom construction of slipcovers, etc.; upholstering furniture. (Wilbur.)

PHYSICAL EDUCATION, RECREATION AND HEALTH

P. E. S10. PHYSICAL EDUCATION ACTIVITIES. (1-2)
June 22-July 31. Not available for credit by physical education majors. Nonmajors in physical education may use this credit to fulfill graduation requirements in physical education. Fee, $6.00.
Section 1—Swimming, (1) Daily, 3:10-4:00. Cole Pool.
Section 2—Tennis, (1) Daily, 2:00:2:50. Cole Tennis Courts. (Steel.)

P. E. 100. KINESIOLOGY. (4)
June 22-July 31. Daily, 9:30-10:50, and arranged; GG-205. The study of human movement and the physical, mechanical and physiological principles upon which it depends. (Nelson.)

P. E. 120. PHYSICAL EDUCATION FOR THE ELEMENTARY SCHOOL. (3)

June 22-July 31. Daily, 11:00-12:20; GG-310. Principles and practices will be presented and discussed, along with appropriate activities for the various grade levels. (Humphrey.)

P. E. 189. PHYSICAL EDUCATION WORKSHOP (PROGRAM DEVELOPMENT). (1-6)

The workshop will concern itself with the development of a modern physical education program allowing additional guidance for individual problems. *This is a content workshop.* (See page 22)

June 22-July 10. Daily, Section 1, 8:30-12:00 & 1:00-3:30; GG-160. (Hanson.)

Daily, Section 2, 8:30-12:00 & 1:00-3:30; GG-37. (Nessler.)

P. E. 189. FIELD LABORATORY PROJECTS AND WORKSHOP. (1-6)

Arranged. Credit according to work accomplished. (Staff.)

P. E. 189A. WORKSHOP IN PHYSICAL ACTIVITY IN RECREATION PROGRAMS FOR THE RETARDED. (See page 24)

June 8-July 3. Daily, 9:00-3:00.

P. E. 195. ORGANIZATION AND ADMINISTRATION OF ELEMENTARY SCHOOL PHYSICAL EDUCATION. (3)

June 22-July 31. Daily, 9:30-10:50; GG-128. Organizational administrative factors necessary for the successful operation of the program in various types of elementary schools. (Humphrey.)

P. E. 200. SEMINAR IN PHYSICAL EDUCATION, RECREATION AND HEALTH. (1)

Arranged; GG-205. (Staff.)

P. E. 230. SOURCE MATERIAL SURVEY. (3)

June 22-July 31. Daily, 9:30-10:50; GG-202. A study of the research literature involving the use of various reference tools. (Eyler.)

P. E. 287. ADVANCED SEMINAR. (2)

June 22-July 31. Daily, 8:00-9:20; Room GG-128.

A study of current problems and trends in the selected fields of Physical Education, Recreation and Health. (Staff.)

P. E. 288. SPECIAL PROBLEMS IN PHYSICAL EDUCATION, RECREATION, AND HEALTH. (1-6)

Arranged. Credit according to work accomplished. (Staff.)

P. E. 291. CURRICULUM CONSTRUCTION IN PHYSICAL EDUCATION AND HEALTH. (3)

June 22-July 31. Daily, 11:00-12:20; GG-202. A study of valid bases for curriculum design with practical applications to curriculum construction. (Eyler.)

P. E. 399. RESEARCH—THESIS. (1-5)

Arranged. Credits according to work accomplished. (Staff.)

HEALTH EDUCATION

HEA. 105. BASIC DRIVER EDUCATION. (3)

June 22-July 31. Daily, 8:00-9:20; GG-201. The place of the automobile in modern life, including classroom and behind the wheel methods of instruction. (Tompkins.)

HEA. 145. ADVANCED DRIVER EDUCATION. (3)

June 22-July 31. Daily, 9:30-10:50; GG-201. Comprehensive programming for traffic safety, including training of young drivers and evaluating results. (Tompkins.)

HEA. 189. HEALTH EDUCATION WORKSHOP. (1-6)

Section 1—June 22-July 10. (Johnson.)
Section 2—July 13-31. (Johnson.)

June 22-July 31. Daily, 8:30-12:00 & 1:00-3:30; W-131. Enrollment by permission of the instructor. Development of the various fields associated with health will be described and discussed by specialists of the University, National Institute of Health and others associated with health agencies. See page 17.

THE FACULTY

SUMMER SESSION, 1964
JUNE 22 - AUGUST 14

ADDISON, Howard P., Assistant Professor of Agricultural and Extension Education
B.S., Purdue University, 1953; M.S., 1958.

ADKINS, Arthur, Visiting Professor in Education
A.B., St. Cloud Teachers College, 1942; M.A., University of Minnesota, 1947; Ph.D., 1953.

AGRE, Gene P., Assistant Professor of Education
B.A., Macalester College 1951; B.S., University of Minnesota, 1953; M.A., 1956.

ANDERSON, Charles R., Instructor in Office Management and Techniques
B.A., University of Maryland, 1957; M.Ed., 1959.

ANDERSON, Frank G., Associate Professor of Sociology
A.B., Cornell University, 1941; Ph.D., University of New Mexico, 1951.

ANDERSON, Henry, Assistant Professor of Statistics
B.A., University of London, 1939; M.B.A., Columbia University, 1948; Ph.D., 1959.

AVERY, William T., Professor and Head, Department of Classical Languages and Literatures
B.A., Western Reserve University, 1934; M.A., 1935; Ph.D., 1937. Fellow of the American Academy in Rome, 1937-39.

AYLWARD, Thomas J., Associate Professor of Speech and Dramatic Art
B.S., University of Wisconsin, 1947; M.S., 1949; Ph.D., 1960.

BAUER, Richard H., Professor of History
B.A., University of Chicago, 1924; M.A., 1928; Ph.D., 1935.

BARI, Ruth, Instructor of Mathematics
B.A., Brooklyn College, 1939; M.A., Johns Hopkins University, 1943.

BATKA, George F., Associate Professor of Speech and Dramatic Art
B.A., Wichita University, 1938; M.A., University of Michigan, 1941.

BENNETT, Robert L., Assistant Professor of Economics
B.A., University of Texas, 1951; M.A., 1955; Ph.D., 1963.

BENNETT, William E., Instructor in Education
B.S., Georgia Teachers College, 1939; M.A., Teachers College, Columbia University, 1947.

BERMAN, JOEL H., Assistant Professor of Music
B.S., Juilliard School of Music, 1951; M.A., Columbia University, 1953; D.M.A., University of Michigan, 1961.

BERNSTEIN, Melvin, Assistant Professor of Music

A.B., Southwestern At Memphis, 1947; B.Mus., 1948; M.Mus., University of Michigan, 1949; M.A., University of North Carolina, 1954.

BICKLEY, William E., Professor and Head of Entomology

B.S., University of Tennessee, 1934; M.S., 1936; Ph.D., University of Maryland, 1940.

BINGHAM, Alfred J., Associate Professor of Foreign Languages

B.A., Yale University, 1933; Ph.D., Columbia University, 1939.

BLAHA, M. Jay, Visiting Lecturer in Education

B.E., St. Cloud State College, Minnesota, 1930; M.A., University of Washington, Seattle, 1939; Ph.D., University of Washington, Seattle, 1941.

BLOUGH, Glenn O., Professor of Education

B.A., University of Michigan, 1929; M.A., 1932; LL.D., Central Michigan College of Education, 1950.

BODE, Carl, Professor of English

Ph.B., University of Chicago, 1933; M.A., Northwestern University, 1938; Ph.D., 1941; Fellow of the Royal Society of Literature of the United Kingdom.

BOTT, Margaret, Assistant Professor of Education and Counselor in Counseling Center.

B.A., St. John's University, 1952; M.S., Hunter College, 1959; Ph.D., Michigan State University, 1962.

BOWIE, B. Lucile, Associate Professor of Education, Institute for Child Study

B.S., University of Maryland, 1942; M.A., Teachers College, Columbia University, 1946; Ed.D., University of Maryland, 1957.

BOURDEAU, Hugo A., Instructor of Sociology

A.B., Tufts University, 1951; M.A., Boston University, 1952.

BOYD, Alfred C., Assistant Professor of Chemistry

B.S., Canisius College, 1951; Ph.D., Purdue University, 1957.

BRANDT, Richard M., Associate Professor of Education, Institute for Child Study

B.M.E., University of Virginia, 1943; M.A., University of Michigan, 1949; Ed.D., University of Maryland, 1954.

BROOME, Eleanor A., Instructor in Early Childhood Education, Institute for Child Study

B.A., University of Maryland, 1943; M.Ed., 1957.

BROWN, Dale W., Assistant Professor of Education

B.A., David Liscomb College, 1953; M.A., George Peabody College for Teachers, 1955; A.M.L.S., University of Michigan, 1963.

BROWN, Frederick A., Assistant Professor in Education

B.S., Lock Haven State College, 1942; M.A., Teachers College, Columbia, 1947; Ed.D., The Pennsylvania State University, 1960.

BROWN, Helen I., Associate Professor and Head, Department of Food, Nutrition, and Institution Administration

B.S., University of Vermont, 1938; M.A., Columbia University, 1948; Ph.D., Michigan State University, 1960.

BROWN, Lillian W., Instructor in Early Childhood Education (part-time)

B.A., Lake Erie College, 1930.

BROWN, Marjorie, Visiting Lecturer of Home Economics

BRYAN, Marie D., Associate Professor of Education

B.A., Goucher College, 1923; M.A., University of Maryland, 1945.

BROWN, Russell G., Associate Professor of Botany

B.S., West Virginia University, 1929; M.S., 1930; Ph.D., University of Maryland, 1934.

BYRD, Albert M., Assistant Professor of Government and Politics

B.S., American University, 1953; M.A., 1954; Ph.D., 1959.

BYRNE, Richard H., Professor of Education and Project Director, Interprofessional Research Commission on Pupil Personnel Services

B.A., Franklin and Marshall College, 1938; M.A., Columbia University, 1947; Ed.D., 1952.

CAIRNS, Gordon M., Dean of Agriculture and Professor of Dairy Husbandry

B.S., Cornell University, 1936; M.S., 1938; Ph.D., 1940.

CALHOUN, Charles E., Professor of Finance

A.B., University of Washington, 1925; M.B.A., 1930.

CAMPBELL, Elwood G., Assistant Professor of History and Education

B.S., Northeast Missouri State Teachers College, 1949; M.A., Northwestern University, 1952; Ph.D., 1963.

CARDOZIER, Virgus R., Professor and Head of Agricultural and Extension Education

B.S., Louisiana State University, 1947; M.S., 1950; Ph.D., Ohio State University, 1952.

CARRUTHERS, John, Assistant Professor of Chemistry

CAUSEY, G. Donald, Associate Research Professor of Speech and Dramatic Art

M.A., University of Maryland, 1950; M.A., 1951; Ph.D., Purdue University, 1954.

CHAMPLIN, James R., Instructor of Recreation

A.B., Earlham College, 1953; M.S., Indiana University, 1956, Re-Dir., 1956.

CHATELAIN, Verne E., Professor of History

B.A., Nebraska State Teachers College, 1917; M.A., University of Chicago, 1925; Ph.D., University of Minnesota, 1943.

CHAVES, Antonio F., Associate Professor of Geography

M.A., Northwestern University, 1948; D.Litt., University of Habana, 1941; Ph.D., University of Habana, 1946.

CHEN, Chunjen C., Assistant Professor of Foreign Languages
B.S., Cornell University, 1919; M.S., University of Maryland, 1920.

COLE, Mildred, Lecturer in Education and Mathematics
B.S., University of Illinois, 1943; M.S., University of Wisconsin, 1951.

COLLINS, James F., Assistant Professor in Education
B.Ed., University State College, New York, 1949; M.S., University State College, New York, 1953.

CONKIN, Paul K., Associate Professor of History
B.A., Milligan College, 1951; M.A., Vanderbilt University, 1953; Ph.D., 1957.

CONWAY, Mary Margaret, Lecturer in Government and Politics
B.S., Purdue, 1957; M.A., University of California (Berkeley), 1960.

COOK, J. Allan, Professor of Marketing
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B.S., Milwaukee State Teachers College, 1942; M.Ed., 1951; Ed.D., University of Illinois, 1954.

YANG, Jackson, Assistant Professor in Mechanical Engineering
B.S., University of Maryland, 1958; M.S., 1962; Ph.D., 1963.

ZEEVELD, W. Gordon, Professor of English
B.A., University of Rochester, 1924; M.A., The Johns Hopkins University, 1929; Ph.D., 1936.

ZEMEL, Jacqueline L., Instructor of Mathematics
B.S., Queens College, 1949; M.A., Syracuse University, 1951.

If you wish to apply for admission to the University of Maryland Summer School, 1964, please complete the forms following.

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University of Maryland
College Park, Maryland 20742

UNIVERSITY OF MARYLAND SUMMER SCHOOL

Application for Room in Residence Halls

(PLEASE TYPE OR PRINT)

Date ..... Student No. ..... Age .... Sex ... Home Phone .....

Name .....
LAST FIRST MIDDLE

Address .....
Number Street Town County State Zip Code

Attendance Dates from ..... to .....

Number of Weeks Attending: (Circle one)
1 2 3 4 5 6 7 8

Classification .....
Undergrad., Grad., Special Name of Workshop or Institute, Pre-College Summer Session, etc.

Roommate .....
Preference, If Any

Type Room: ☐ Single ☐ Double
Prepaid Board: ☐ 6 wks ☐ 8 wks

FOR OFFICE USE ONLY

Assignment .....

Changes .....

Withdrawn ☐ Date .....

Reason .....

Key .....
Yes or No

SUMMER 1964

Please send me an application for admission to the

1964 Summer School.

NAME .....
Please print

STREET ADDRESS .....

CITY ..... STATE ..... ZIP .....